Customer Based Ridesharing and Transit Interconnectivity Study

June 2018

Customer-Focused, Technology-Enabled Multi-Modalism

VOLUME 2: MARKET RESEARCH

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Market Research Report

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METHODOLOGY & SURVEY POPULATION

In preparation for the survey and focus groups reported upon in this chapter, in-depth interviews were conducted with Employee Transportation Coordinators (ETCs) and managers for 14 of the largest employers in the San Bernardino Valley. A variety of commute and transportation demand management topics were covered and permissions were sought to conduct the planned e-survey. Ten of the original 14 organizations agreed to participate. [1] [2]

This study's survey of commuter behavior and motivations was conducted as an online survey (Table 1). Participating employers sent email invitations to all employees with email access. The invitation included a link that the employee could click on to go directly to the survey. The survey could be completed on a computer, tablet or smartphone. Employers were asked to send out a follow-up invitation one week after the initial invitation.

Table 1, E-Survey Responses by Location

Employer/University	Responses
San Bernardino County	4247
Caltrans	642
Patton Hospital	529
Kaiser Medical Center	22
Parsons	28
Fontana	3
Ontario	86
Rancho Cucamonga	120
Redlands	92
Total Employees	5,769
CSUSB Students	1,446

As an incentive to complete the survey, respondents were offered the opportunity to sign up to win one of 10 $100 cash prizes. They were also given the chance to sign up to participate in incentivized focus groups.

Nine employers participated in the initial survey in February 2017, resulting in 5,769 responses. A tenth organization, California State University at San Bernardino (CSUSB), agreed to invite its students to participate in the e-survey in June 2017, resulting in an additional 1,446 responses. CSUSB students are a distinctly different commuter audience and will be treated as a separate sample within this report.

In early June, a series of nine focus groups were held to explore in more depth various survey findings and to test potential strategies to increase alternate mode usage. The nine focus groups were held in the course of one week in multiple locations throughout the San Bernardino Valley: Arrowhead Regional Medical Center (ARMC) in Colton, Brulte Senior Center in Rancho Cucamonga, Redlands Community Senior Center in

[1] The large employers who chose not to participate in the study's e-survey were Loma Linda VA Medical Center, Loma Linda University Medical Center, Inland Empire Health Plan and Stater Brothers Distribution Center. The first three organizations were anticipating or had just completed their own AQMD commuter survey and did not want a second, similar survey at essentially the same time. Stater Brothers employees do not have company emails so there was no means by which to distribute such a survey.

[2] Appendix A presents the transportation demand management (TDM) elements of the large employers interviewed in conjunction with this study.

Redlands, Loma Linda University Medical Center in Loma Linda, the SCAG offices in San Bernardino and County Offices in San Bernardino.

Participants for six of the nine groups were recruited from among persons responding to the e-survey who indicated that they would be interested and willing to join a focus group discussion (Table 2). Individuals were selected for the groups to represent a mix of employers, work sites, current commute modes and willingness to consider alternate modes. Two groups were recruited by Loma Linda's parking and transportation division and one group was made up of transit riders intercepted at the San Bernardino Metrolink station and Transit Center. To encourage participants to show up and to stay for the 90-minute discussions, they were offered a $75 incentive payment. A total of 77 individuals participated in the nine focus groups.

Table 2, List of Focus Groups

Focus Groups		
Date/Time	**Location**	**Participants**
6/5/17 12:00-1:30 p.m.	Loma Linda	Loma Linda University Medical Center Employees
6/5/17 2:00 - 3:30 p.m.	Loma Linda	Loma Linda University Medical Center Employees
6/5/17 5:15 - 7 p.m.	San Bernardino	Current Metrolink and Omnitrans Riders recruited at transit stations
6/6/17 12 - 1:30 p.m.	San Bernardino	County and Caltrans Employees who participated in E-Survey
6/6/17 5:30 – 7 p.m.	San Bernardino	County Employees from various departments who participated in E-Survey
6/7/17 12 - 1:30 p.m.	Colton	Arrowhead Regional Medical Center Employees who participated in E-Survey
6/7/17 5:30 - 7:30 p.m.	Redlands	City of Redlands and ESRI Employees who participated in E-Survey
6/8/17 12 - 1:30 p.m.	San Bernardino	County Employees from various departments who participated in E-Survey
6/8/17 5:30 - 7:30 p.m.	Rancho Cucamonga	Employees from Ontario, Rancho Cucamonga and Caltrans that participated in E-Survey

DEMOGRAPHICS OF THE SAMPLES

The employer sample is largely composed of public-sector employees with full-time jobs who work within San Bernardino County. It does not reflect the county resident population nor the transit user base. However, it does include a diverse population, as it covers all county departments, several cities, Arrowhead Medical Center and Patton Hospital.

Therefore, it does have much to teach us about the commute behavior and attitudes of middle-income adults commuting to full-time jobs.

The CSUSB survey is a distinctly different population — made up primarily of young adults at a very different point their life cycle.

The age distribution of the two samples is shown in Figure 1. The employee respondents were all 20 or older, with the vast majority (78%) between 30 and 60 and 13% over 60. By contrast, the CSUSB sample of college students included primarily individuals in their 20s.

Figure 1, Age of Respondents

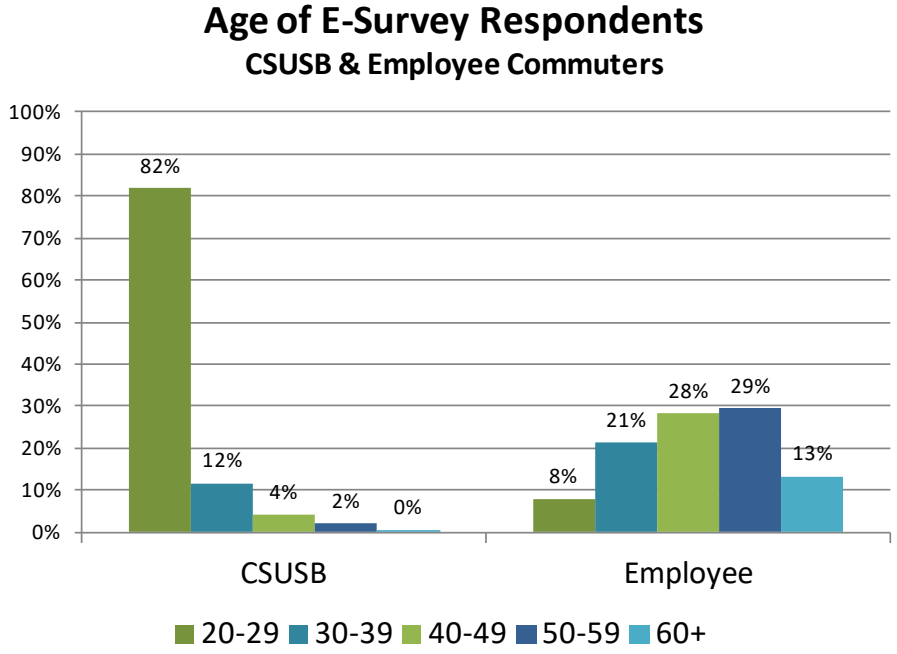
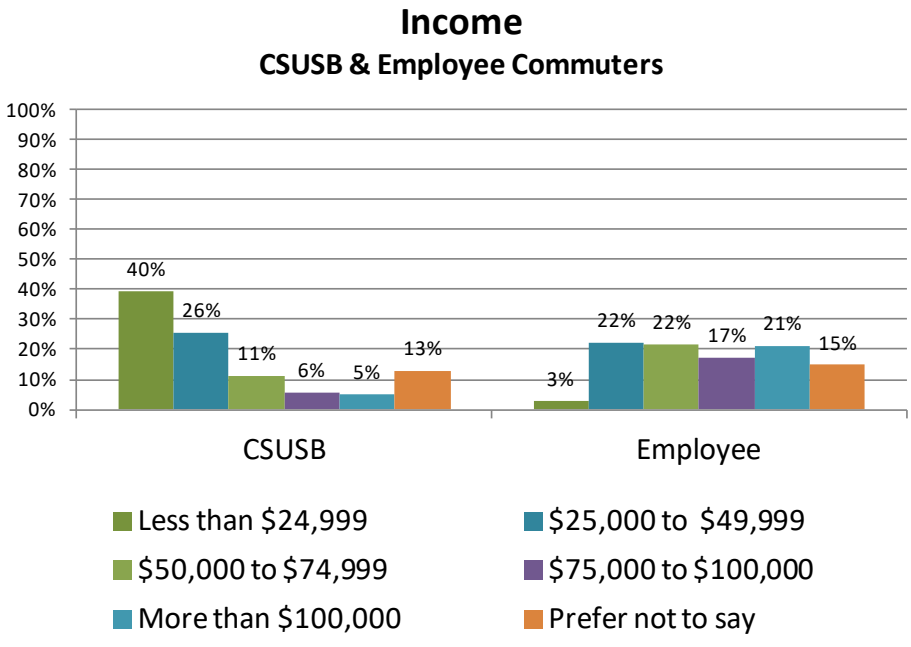


Figure 2, Income of Respondents



Since the employee sample was made up primarily of individuals with full-time, public-sector jobs, incomes were higher than for the overall community. Figure 2 shows the distribution of income of respondents. Sixty percent of the employee sample reported household incomes of above $50,000 and only 3% reported incomes under $25,000. Conversely, 66% of the student sample had incomes under $50,000 and 40% were under $25,000.

Comparison of Respondents to Population

Figures 3 and 4 compare the demographics of the survey respondents to two other data sets:

- County population based on the American Communities Survey (ACS)
- Onmitrans ridership based on a recent on-board survey.

Note: For the purposes of this comparison, non-respondents have been dropped and approximations made in order to make the reporting categories match.

Figure 3, Comparison of Age of Respondents

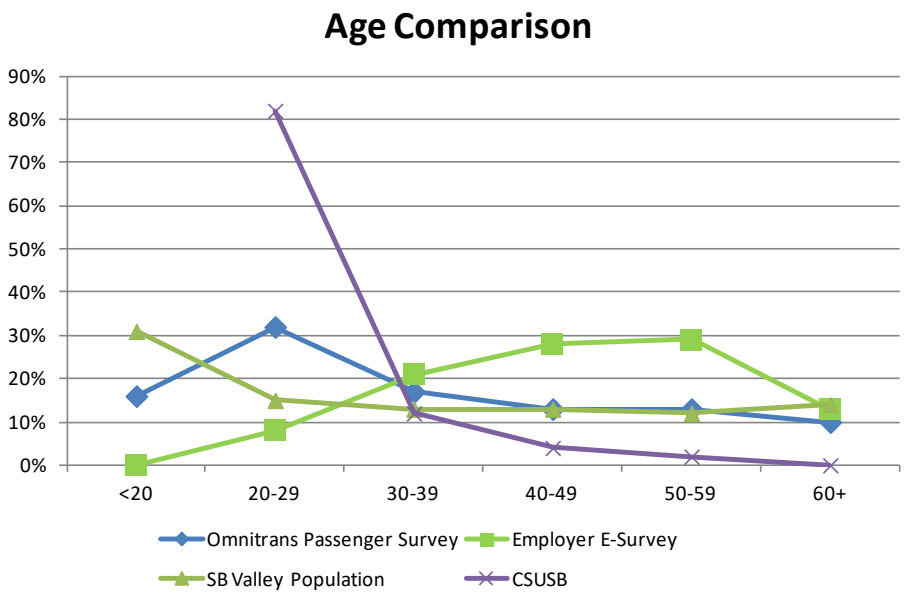
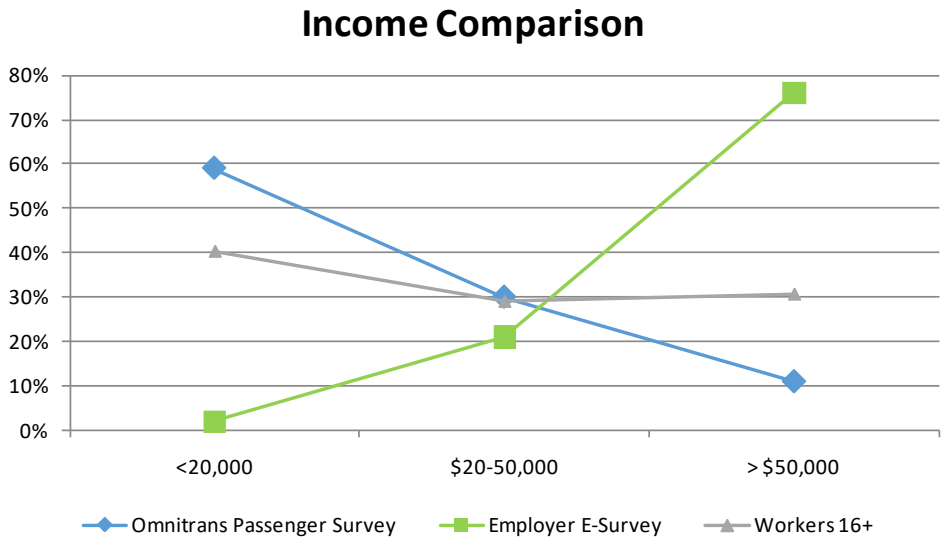


Figure 4, Comparison of Income of Respondents



It is obvious that the CSUSB sample is a distinct subset of the population and not representative of San Bernardino commuters as a whole, as it includes primarily individuals in their 20s. However, this is true also for the employee sample. The charts clearly demonstrate that the employee sample is older and higher income than the overall population and much older and higher income than the Omnitrans ridership, which tends to include many young and lower-income individuals.

Together, these two samples provide us with an important view into the behavior and motivations of two significant subsets of commuters, and give us a context within which to think about commuters more generally.

CURRENT COMMUTE MODE

Table 3, Commute Mode of Respondents

Usual Commute Mode	Employees	Students
Drive alone (car, truck or motorcycle)	86.11%	70.76%
Carpool (2-4 people in vehicle)	9.67%	11.93%
Vanpool (5-15 people in vehicle)	2.22%	0.61%
Ride Metrolink/Train	0.09%	0.07%
Ride Bus	0.33%	5.86%
Bike	0.12%	0.41%
Walk (skate or skateboard)	0.17%	5.18%
Take Uber/Lyft or taxi	0.05%	0.41%
Use Access paratransit	0.02%	0.07%
Work from home	0.23%	0.61%
I use a combination of travel modes	0.99%	4.09%

Usual Commute Mode of Employees and Students

Respondents were asked ***"By what travel mode do you most often commute to and from work or school?"*** Table 3 shows the distribution of responses for each of the two samples — employees and CSUSB students.

In both cases, driving alone is the most common commute mode. However, it is much more dominant among employees (86.1%) than among students (70.8%).

The two groups are about equally likely to rideshare — 11.9% of employees carpool or vanpool, while 12.5% of students do so. Employees are more likely than students to be part of a formal vanpool (2.2% and 0.6%, respectively).

Students are much more likely to ride the bus — nearly 6% of students say they usually ride the bus, while less than 0.5% of employees say the same. The two groups are about equally likely (or unlikely) to ride Metrolink — about 0.1% of each group.

Students are also much more likely to walk (5.2%) than are employees (0.2%). Only a small number of each group bike as a commute mode— 0.1% for employees and 0.4% for students.

A number of respondents said that they use a combination of modes. Most of these involve driving to a park-and-ride lot to catch a bus, carpool or vanpool, or walking/biking to a bus stop.

Table 4, Respondents' Commute Mode Compared to County Profile

Mode*	Employees	Students	AQMD Surveys	ACS (2014)
Drive Alone	86.00%	70.75%	76.71%	78.00%
Carpool/Vanpool	13.20%	15.50%	13.08%	13.80%
Bus/Train	0.60%	8.40%	1.22%	1.90%
Walk	0.20%	5.60%	0.89%	N/A
Bicycle	0.10%	0.40%	0.53%	N/A
Telecommute	0.20%	0.60%	0.40%	N/A
Other	1.05%	1.00%	7.62%	N/A

* Individual modes include those who use a mix of modes

Comparison to County Commute Profile

Table 4 above compares the modal distribution of the survey employee and student respondents to two additional data sets:

- The Air Quality Management DIsctrict (AQMD) annual survey required of employers with more than 200 employees
- The ACS journey to work data

Note: The carpool/vanpool and bus/train usage from the survey have been consolidated and adjusted to reflect those respondents who use these modes as part of a multimodal commute.

While the level of ridesharing (carpool/vanpool) is essentially the same across all four data sets (13% to 15.5%), transit usage varies rather sharply. This is a reflection of the fact that transit is heavily used by younger people who are generally also lower income. The employee data set includes almost no young people, while the CSUSB data set is made up largely of young people. As a result, the employee data set includes far lower transit usage (0.6%) than the ACS (1.9%), and the student data base far higher (8.4%).

Employer Interview Input

Interviews with Employee Transportation Coordinators (ETCs) and other managers conducted at the inception of the project predicted these findings. Key themes reported immediately after the interviews in November 2016 included:

- Most employees drive alone and have little interest in doing otherwise.
- Carpooling is the primary alternative mode used and promoted by employers.
- Transit is largely perceived as only for those with no choice and not considered safe.
- Bike commuters are a small group but the most enthusiastic alternate mode users.

As a consequence of these perceptions, most ETCs interviewed defined their role very narrowly: administering the existing rideshare incentive programs that their employers offer and complying with AQMD reporting rules for large employers.

An important exception to this was at CSUSB where well-informed ETC staff had procedures in place to introduce the full range of mobility options to students and employees. Other exceptions were Loma Linda

VA Medical Center and Loma Linda University Medical Center, which gave much attention to walking and bike commuting. Many medical center employees live within a short distance of the facilities and parking difficulties at both medical centers make alternative modes of greater import. Despite the more active Transportation Demand Management (TDM) efforts at the medical centers, transit was not aggressively promoted. Omnitrans sbX service provides direct service to the medical centers every 10 to 15 minutes throughout the day; however, there was limited awareness of this specialized service and limited information provided by ETCs to employees about transit and rail options.

A final exception was at ESRI where there was agreement by the ETC and staff that the institutional culture expected responsible commuting even though incentives are limited. Although the ETC role was narrowly defined with the onus on the employee to identify mobility choices, there was significant evidence of alternate mode commuting, including well-used facilities to support bicycling and full vanpool and rideshare preferred parking spaces (with a wait list).

POTENTIAL ALTERNATE MODE USAGE

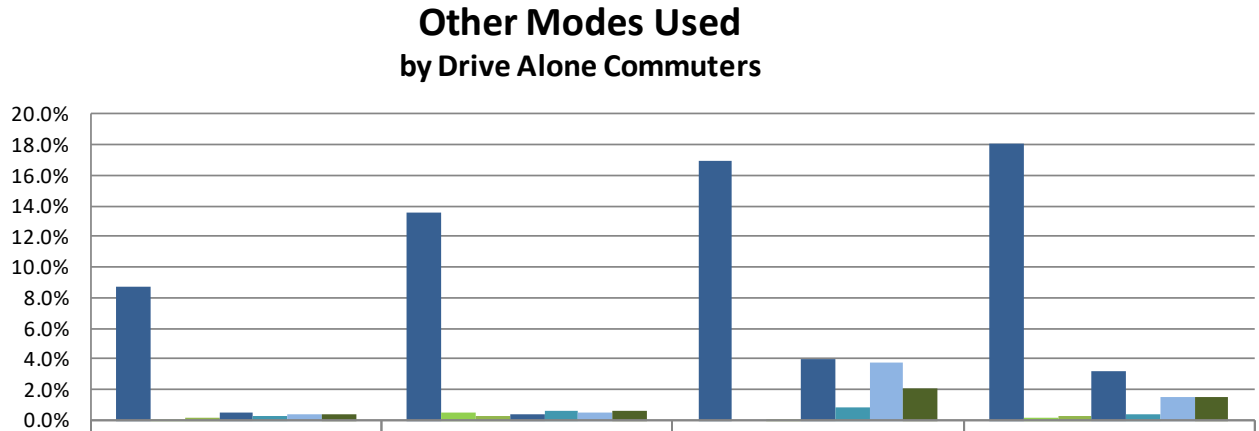
Alternate Mode Experience

Drive-alone respondents were asked a series of questions to gauge their experience with and willingness to consider commuting by an alternate mode.

- "During the past 30 days, have you used a travel mode other than driving alone to commute to or from work at least once?"
- 90% of employees and 79% of CSUSB students had not used another mode.
- 10% of employees and 21% of students had used another mode.
- Those who said "no" were asked, "In the past year have you used a travel mode other than driving alone to commute to or from work at least once?"
- An additional 15% of employees and 22% of students who generally drive alone had used another mode at least once in the past year.

In total, nearly one-quarter of the drive-alone employees and more than 40% of the drive-alone students had used an alternate mode at least once in the past year. They were asked what mode or modes they had used. Figure 5 shows the distribution of responses. The percentages are of employees or students who usually drive alone. Note that some respondents had used more than one mode and are included in multiple categories.

Figure 5, Alternative Mode Use



	Employees		Students	
	Past 30 Days	Past Year	Past 30 Days	Past Year
Carpool	8.8%	13.5%	17.0%	18.1%
Vanpool	0.1%	0.5%	0.0%	0.1%
Metrolink	0.1%	0.3%	0.1%	0.2%
Bus	0.5%	0.4%	3.9%	3.2%
Bike	0.3%	0.7%	0.9%	0.4%
Walk	0.4%	0.6%	3.8%	1.5%
Uber/Lyft/Taxi	0.4%	0.6%	2.1%	1.5%

More than two in 10 employees who drive alone (22.3%) and more than one-third of students who drive alone (35.1%) had carpooled in the past year. An additional half of a percent of employees had vanpooled.

Smaller numbers had used another mode. In all cases, students were more likely to occasionally use modes other than driving alone.

- Only 1.3% of employees had tried transit — either Metrolink (0.4%) or bus (0.9%). However, 7.4% of students had used transit — primarily bus at 7.1%.
- Among employees, about 2% had used an active transportation mode — 1% each for biking and walking. Among students 1.3% had biked and 5.3% had walked to CSUSB.
- One percent of employees (1%) and 3.6% of students had used Uber/Lyft or a taxi to commute to work or school at some time during the past year.

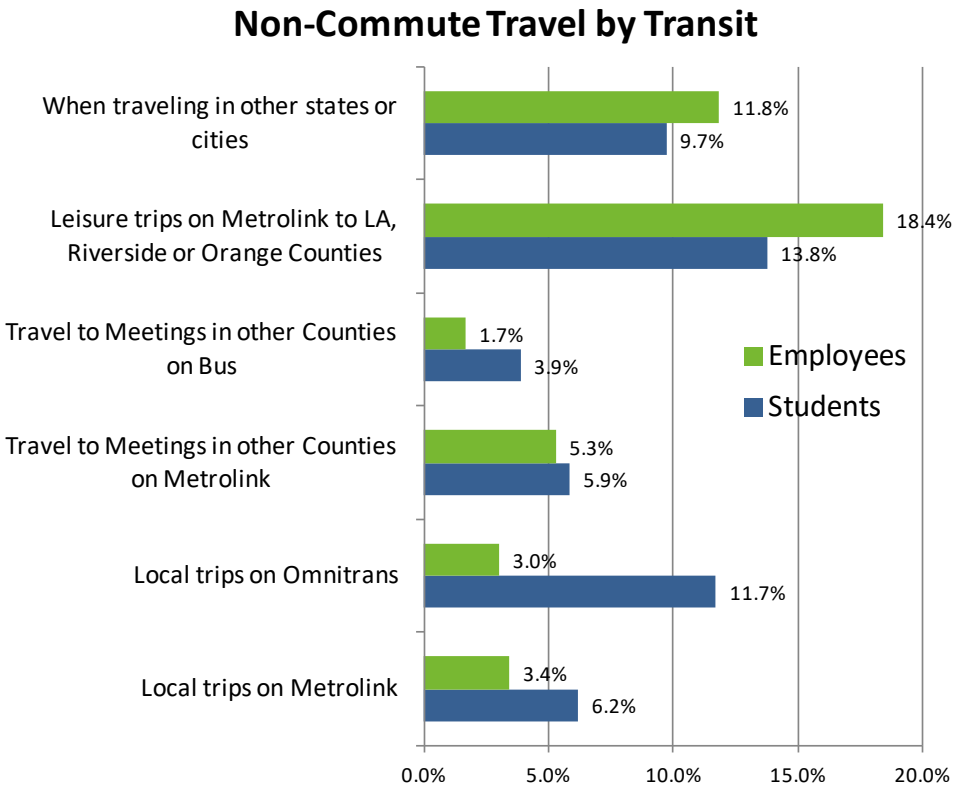
Non-Commute Transit Experience

All respondents were also asked if they ever use public transit for non-commute purposes. Just over one-quarter of each group (26% of employees, 28% of students) said that they did.

Figure 6 shows the non-commute purposes for which respondents said they use transit (respondents could select multiple purposes).

The most common uses were leisure trips on Metrolink to Los Angeles and surrounding counties (18.4% of all employees and 13.8% of students) and when traveling in other cities or counties (11.8% of employees and 9.7% of students).

Figure 6, Non-Commute Travel by Transit



Students were much more likely than employees to use transit for local trips (17.9% of students compared to 6.4% of employees). Students were also somewhat more likely to use transit to travel to meetings in other counties (9.8% compared to 7%).

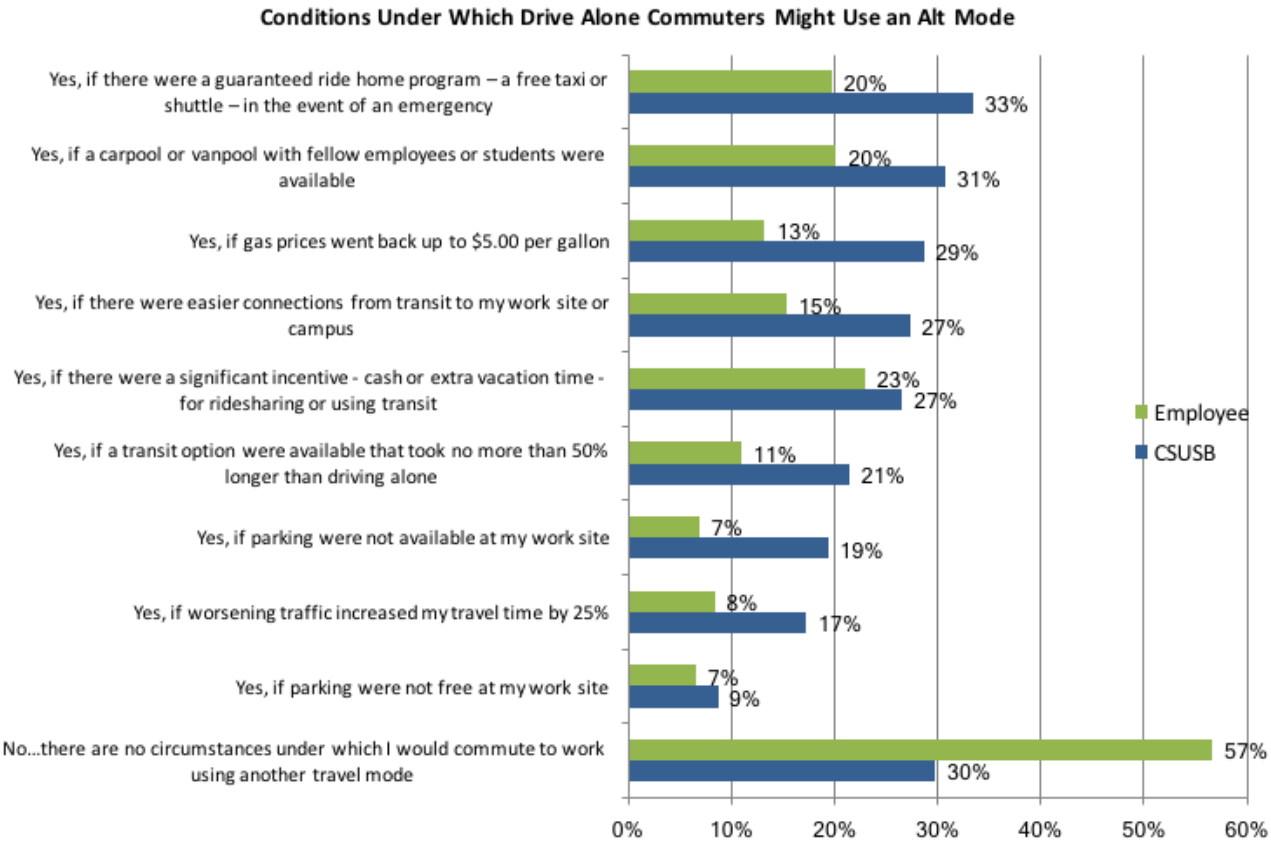
Conditions for Alternate Mode Consideration

Those drive-alone commuters who had not used an alternate mode in the past year were asked the question: "Are there any conditions under which you could see yourself occasionally commuting to work by a travel mode other than driving alone — at least once a month? "

They were given a list of possibilities and asked to select all that applied. Fifty-seven percent of employees and 30% of students said that there were no circumstances under which they would commute by another mode. However, 43% of employees and 70% of students thought there might be. Figure 7 shows

the distribution of responses.

Figure 7, Conditions for Alternative Mode Consideration



Among employees, the most compelling conditions related to the availability of alternatives (e.g., carpool/vanpool with fellow employees or better transit connections to work site) and an incentive to choose them (e.g., cash, vacation time, guaranteed ride home). Environmental factors such as higher gas prices and worsening traffic were cited by smaller numbers of respondents.

CSUSB students expressed a greater willingness than employee respondents to consider alternate mode use under every condition. Having a guaranteed ride home was the single strongest circumstantial motivator, but was closely followed by the availability of a carpool with a fellow student, higher gas prices and better transit connections.

Those who indicated a willingness to consider another mode were asked what travel mode they would choose to use under the stated conditions. Among employees, carpool and vanpool were cited by two-thirds (66%) of respondents. Smaller groups said they would choose to use Metrolink (13%), bus (7%), bike (4%), walk (2%) or Uber/Lyft/taxi (7%).

Among students willing to consider an alternate mode, 59% would consider a carpool/vanpool, while one-quarter would consider transit (12% Metrolink, 13% bus). Only 2% would consider biking and 1% walking; however, 11% would consider Uber/Lyft.

MARKET SEGMENTATION BASED ON CURRENT AND POTENTIAL MODE USE

The series of questions about usual commute mode, other commute modes use in the past year and circumstances under which one might consider a mode other than driving alone were used to create the market segmentation illustrated in Figures 8 and 9. The top chart represents the overall employee sample, while the bottom chart represents all student respondents.

The first column in each chart represents drive-alone commuters who have neither tried another mode nor have any interest in doing so. They represent 44% of the employee sample, but only 16% of the student sample.

The second column on each chart includes drive-alone commuters who can see themselves using another mode, but have not tried one in the past year (26% of

Figure 9, Employees' Mode Used and Potential to Use Alternative Mode

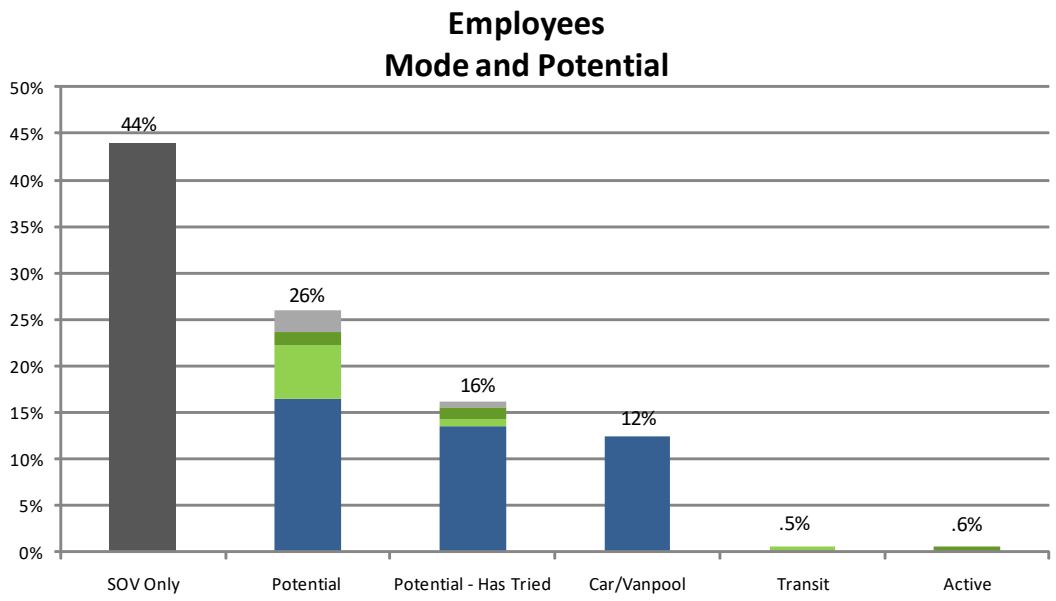
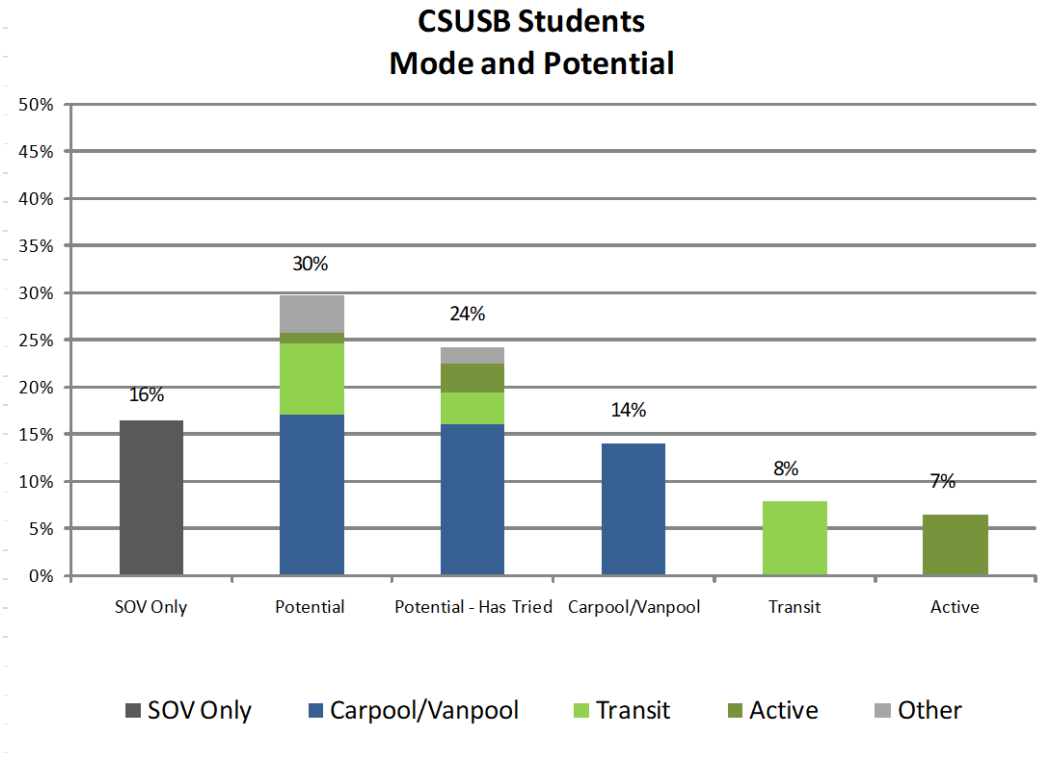


Figure 8, Students' Mode Used and Potential to Use Alternative Mode



employees and 30% of students). The colors within the column indicate the mode they would be most likely to use — carpool/vanpool, transit, active transportation (bike/walk) or other.

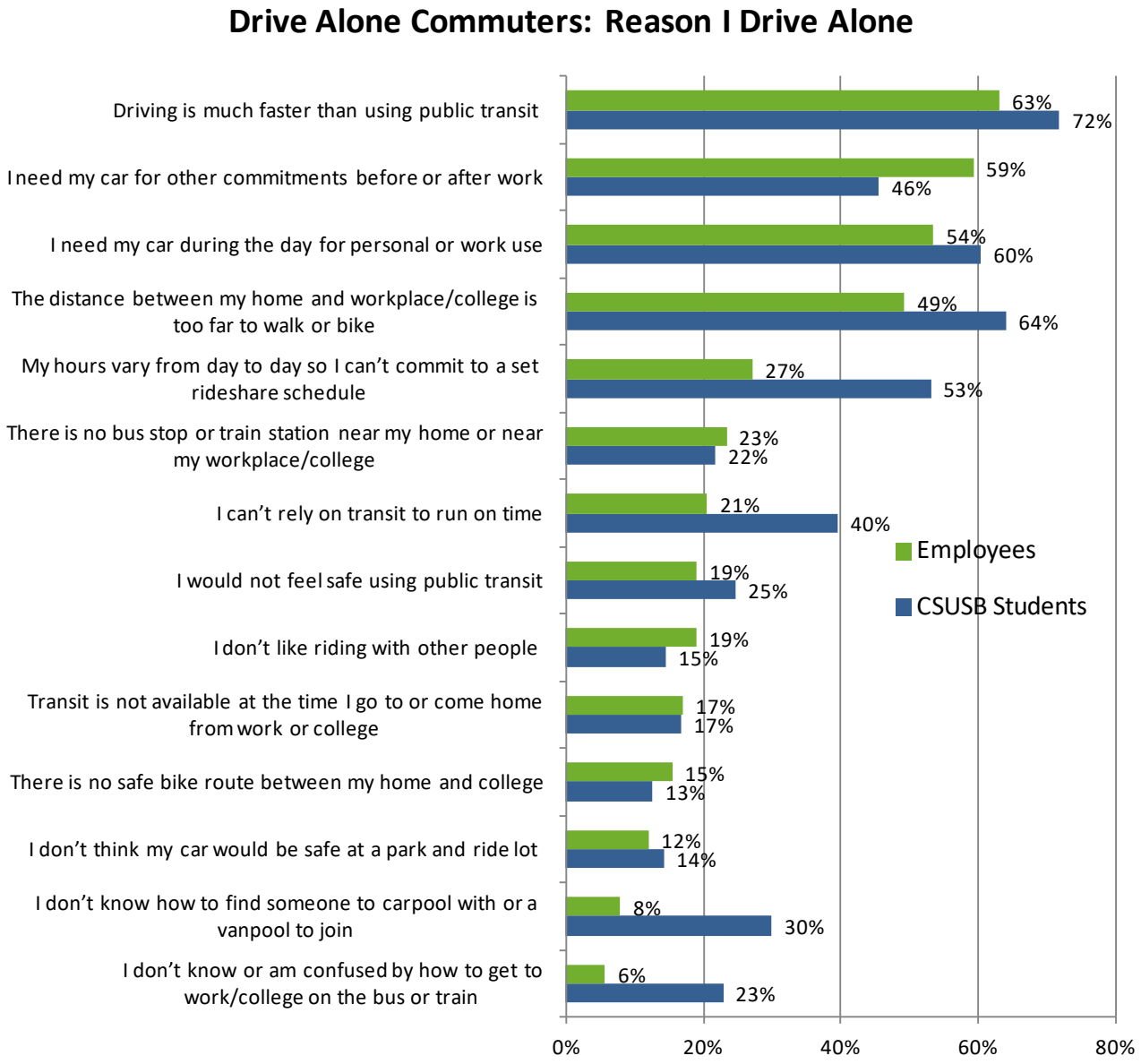
The third column in each chart includes drive-alone commuters who have actually tried another mode during the past year (16% for employees and 24% of students). Again the colors within the column represent the mode they are mostly likely to consider.

The remaining columns include those who currently use an alternate mode: carpool/vanpool, public transit (train or bus) or active transportation (walk/bike).

The potential to increase alternative mode commuting lies in the second and third columns. Clearly, there is the greatest potential to reduce drive-alone commuting by converting commuters to carpool and vanpool. However, there are smaller segments that are open to the idea of riding the bus or using an active mode.

EXPERIENCE WITH CURRENT MODE

Figure 10, Reasons for Drive-Alone Commuters



Reasons to Drive Alone

Those who drive alone were asked to note the reasons they choose to do so. They were instructed to select "all that apply" from among a list of commonly heard phrases. Figure 10 shows the percent of drive- alone commuters among each of the two samples that selected each reason.

The top tier of reasons that commuters drive alone relate to travel time and other commitments that require a vehicle. Almost two-thirds (63%) of employees and 72% of students said that one reason they drive alone is that driving is much faster than using public transit. For employees, this was closely followed

by "I need my car for other commitments before or after work" (59%), and "I need my car during the day for personal or work use" (54%). For students, the other top reasons were needing a car during the day (60%) and the fact that the college is too far from their home to walk or bike (64%).

"My work/class hours vary from day to day so I can't commit to a set rideshare schedule" was a reason for more than a quarter (27%) of the employee respondents and more than half (53%) of students.

Around 20% of the employee sample noted each of several reasons that reflect negative perceptions of transit or ridesharing: "I can't rely on transit to run on time" (21%), "I would not feel safe using public transit" (19%), and "I don't like riding with other people" (19%). Student respondents were in line with employees with one notable exception. Forty percent (40%) of students (compared to only 21% of employees) said "I can't rely on transit to run on time." This may reflect a higher level of familiarity with transit or a greater willingness to consider it, and thus a more discerning view.

Somewhat smaller numbers noted lack of options available for their commute: "Transit is not available at the time I go to or come home from work/college" (17% of employees and students) or "There is no safe bike route between my home and work/college" (15% of employees and 13% of students).

The lowest tier of reasoning for employees related to lack of information. Only 8% said "I don't know how to find someone to carpool with or a vanpool to join," and only 6% said "I don't know or am confused by how to get to work on the bus or train." However, for students it was a different matter. Thirty percent (30%) don't know how to find someone to carpool with and 23% are confused by how to use the bus or train. While these factors may be true for many more of the respondents, they aren't the reasons that prevent them from using an alternate mode.

Focus Group Input

Focus group participants who currently drive alone echoed the findings of the survey, citing travel time and various needs for their vehicle as reasons they drive alone.

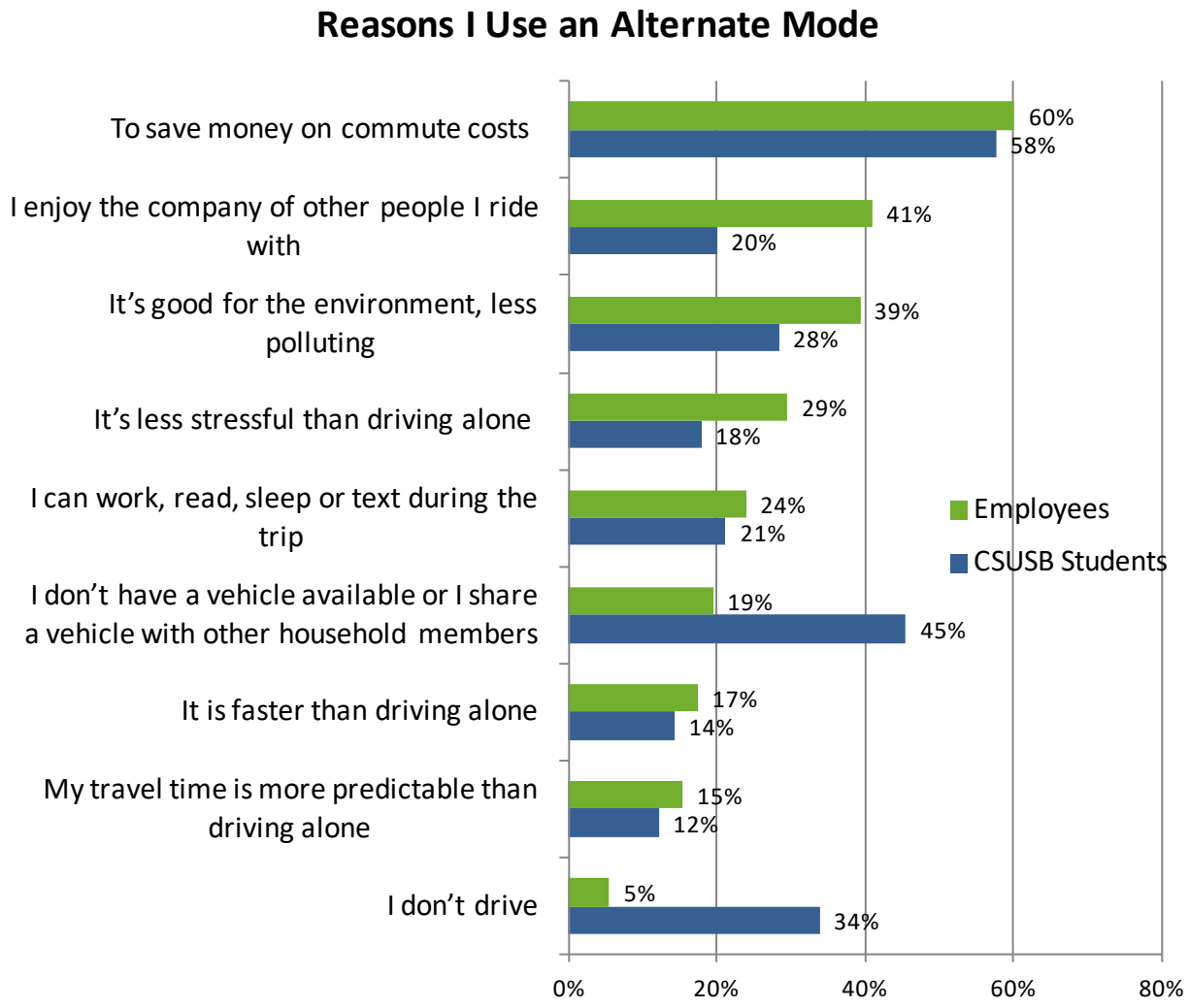
Quite a number of the participants had looked at the possibility of using transit but had been deterred by long travel times.

- A Yucaipa resident said "I looked at the bus book and found a route, but it would take way too long."
- A person who had used transit extensively in other markets said that he does not in San Bernardino: "If I can get somewhere faster by car, why take the bus?"

Others related the many reasons they need their vehicle on the way to/from work or during the work day.

- It's easier and faster to use my own car for work trips than to get a county/city car.
- I like to stop at Costco on the way home from work.
- I like to go home at lunch and do laundry.
- I need to drop my kids at school on the way to work.

Figure 11, Reasons for Alternative Mode Use



Reasons Not to Drive Alone

Those who already commute by a mode other than driving alone (787 individuals) were asked about the reasons they choose to do so. Their rationales are quite different.

Sixty percent (60%) of the employee respondents and 58% of students said they use a non-SOV mode to save money on commute costs.

For employees, the next most common reasons were "I enjoy the company of other people (41%), and "It's good for the environment (39%)." However for students, the next tier of reasons includes, "I don't have a vehicle available" (45%) and "I don't drive" (34%).

Employees were more likely than students to say that using an alternate mode is less stressful (29% and 18%, respectively).

Figure 11 shows the full distribution of responses for each of the two groups.

Focus Group Input

Among the alternative mode users in the focus groups, cost savings and avoiding the stress of driving were the primary reasons given for ridesharing or using transit. Cost savings that were cited include gas and vehicle wear and tear, but also the incentives offered by employers. In the absence of incentives, cost might be less motivating.

While avoiding the stress of driving is only a motivator for a small segment of the population, it seems to be a very strong one. One Claremont-to-Redlands commuter had been driving alone but described how the stress of the long commute got to be too much for him. He was willing to accept quite a lengthy transit commute in order to read, relax or sleep rather than fighting traffic.

For those who worked at the medical centers — LLUMC or Arrowhead — preferred parking was an important benefit of carpooling since finding a parking spot could often be challenging and time consuming. For other carpoolers, HOV lanes reduce travel time.

Other alternate mode users related benefits that were much more individual or personal. One young woman had totaled two cars and felt much safer on transit. Others related the joy of sleeping, reading or just having alone time on the train or bus instead of "growing old in traffic." One employee liked having reliable air conditioning, something his car didn't offer. And another woman had become best friends with her long-time carpool partner and valued the time together commuting.

Among the transit users recruited at the transit station were several life-long transit users. They understand the Metrolink, Omnitrans and even the Metro system in the way that most commuters understand the road network. They reported nuanced route planning decisions that varied by day and time. For example, they may use one route to get to work but another to come home in order to reduce travel time, maximize reliability or minimize walking when it is hot. They will use Metrolink when it is necessary or cost efficient, but will use lower-cost buses when possible. While they recognize the limitations of the transit systems, they value the independence that such travel modes give them even if they have a car and could drive — Independence from high gas prices, from the cost of car repair and maintenance, from the stress of driving day to day.

Negative Experiences Among Alternate Mode Commuters

Specific challenges of using alternate modes exist that are often cited as reasons not to consider them. We wondered how "real" these challenges are so we asked users of the specific modes if they had experienced various negative occurrences. Figures 12 and 13 show the challenges tested with each mode group and how employees and students responded. Keep in mind that these questions were asked only of those who have used a specific mode, so the sample sizes for transit users and walkers/bikers are quite small.

Figure 12, Challenges of Alternative Modes for Employees

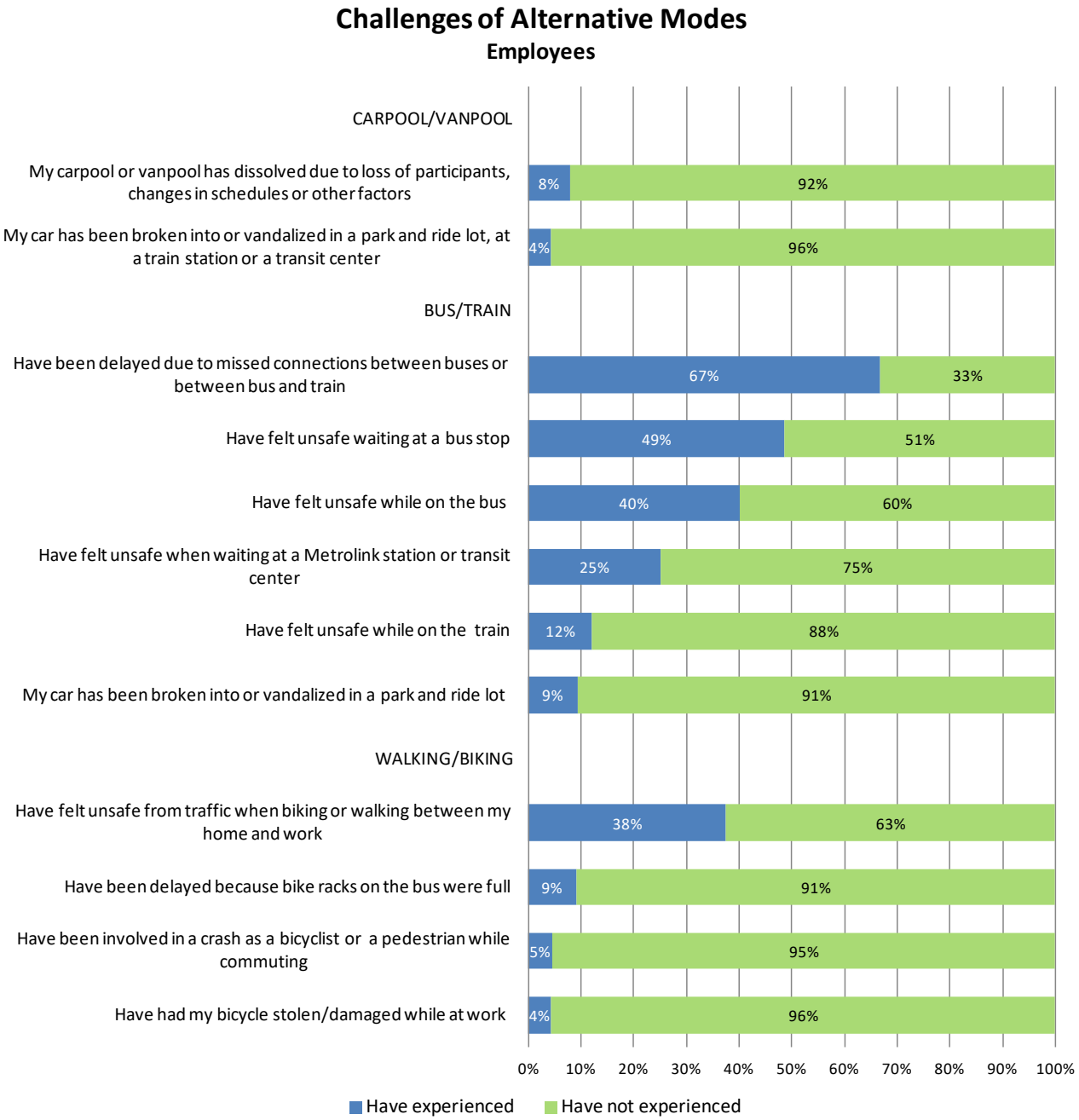
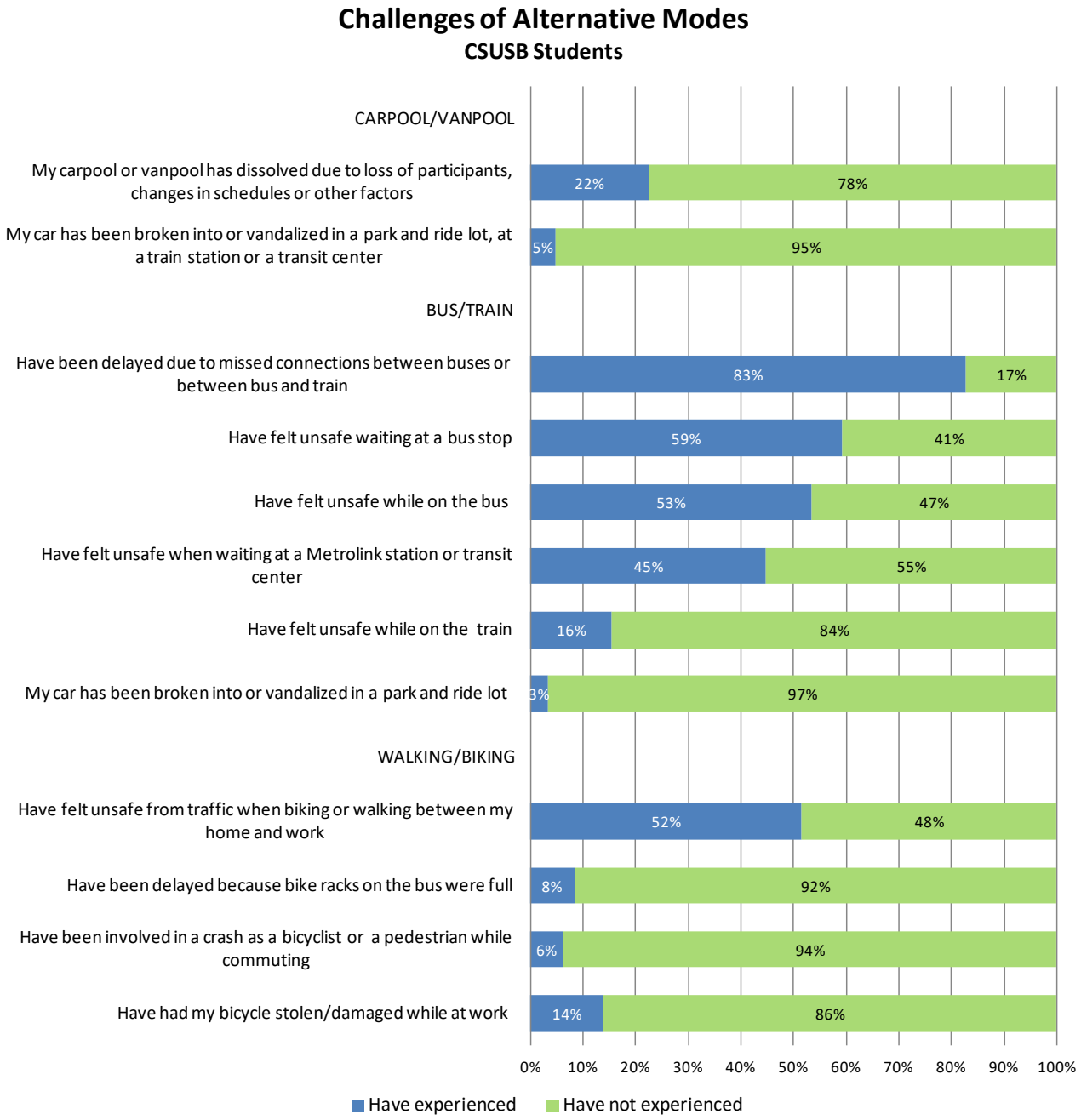


Figure 13, Challenges of Alternative Modes for Students



Among carpool/vanpoolers, only a small percentage of employees and students had their car vandalized at a park-and-ride lot (4% and 5%, respectively.) While only 8% of employees had seen their group dissolve because of loss of participants, 22% of students had had this experience.

Not surprisingly, most transit riders (67% of employees and 83% of students) have been delayed due to missed train or bus connections. More concerning, many of them have felt unsafe at some point in their transit trip — while waiting at a bus stop (49% and 59%) or at the train station or transit center (25% and 45%), or while on the bus (40% and 53%) or train (12% and 16%). Students appear to be somewhat more fearful than employees.

Nine percent (9%) of employees and 3% of students who use transit say their car has been vandalized at a park-and-ride lot.

Among active transportation commuters, only a small number have been involved in an accident when biking or walking (5% of employees and 6% of students). Students are more likely to report having had a bicycle damaged or stolen (14% versus 4% of employees).

About half of students who bike (52%) and 38% of employees have felt unsafe from traffic during their commute. Nine percent (9%) of employees and 8% of students have been delayed because the bike racks on the bus were full, meaning they either had to wait for the next bus or bike a longer distance.

Focus Group Input

During the focus groups, we heard anecdotes that related to each of these circumstances.

- Carpoolers described losing a carpool partner and being unable to find a new one or uninterested in looking for one.
- Bicyclists complained of poor or missing bike lanes, making it unsafe or uncomfortable to ride with traffic. One spoke of a stolen bicycle.
- Bus riders related instances of buses running late, particularly in the afternoon.
- One long-time Metrolink rider spoke of recent improvements in on-time performance for trains. This observation was echoed by others.

However, the most pervasive concern we heard was a fear of commuting with people that are unknown or different. This fear impacts people's willingness to consider both transit and ridesharing.

Among those who haven't used transit, there is a widespread perception that it isn't safe because of the types of people who ride the bus and hang out at bus stops. Among those who do use transit, there is an acknowledgement that there are "colorful" and sometimes "challenging" people on the bus. One rider even noted that she doesn't want to "linger" at the transit center because of the people who hang out there — homeless and those with mental illness. However, these perceptions all stopped short of fear, rather they were just regarded as the realities of dealing with a diverse population. One participant noted that you have to tackle the perception…"it's just a bus, not something scary."

On the rideshare side, the fear of others manifested as an unwillingness to consider riding with anyone that the individual doesn't know personally. For some, this limited the pool of potential carpooler partners not only to their employer, but to their immediate department. In addition to fear of riding with a stranger, concerns included ending up with someone who was unpleasant, late or otherwise disagreeable.

AWARENESS OF COMMUTING TOOLS

Figure 14, Employees' Awareness and Use of Commuting Tools

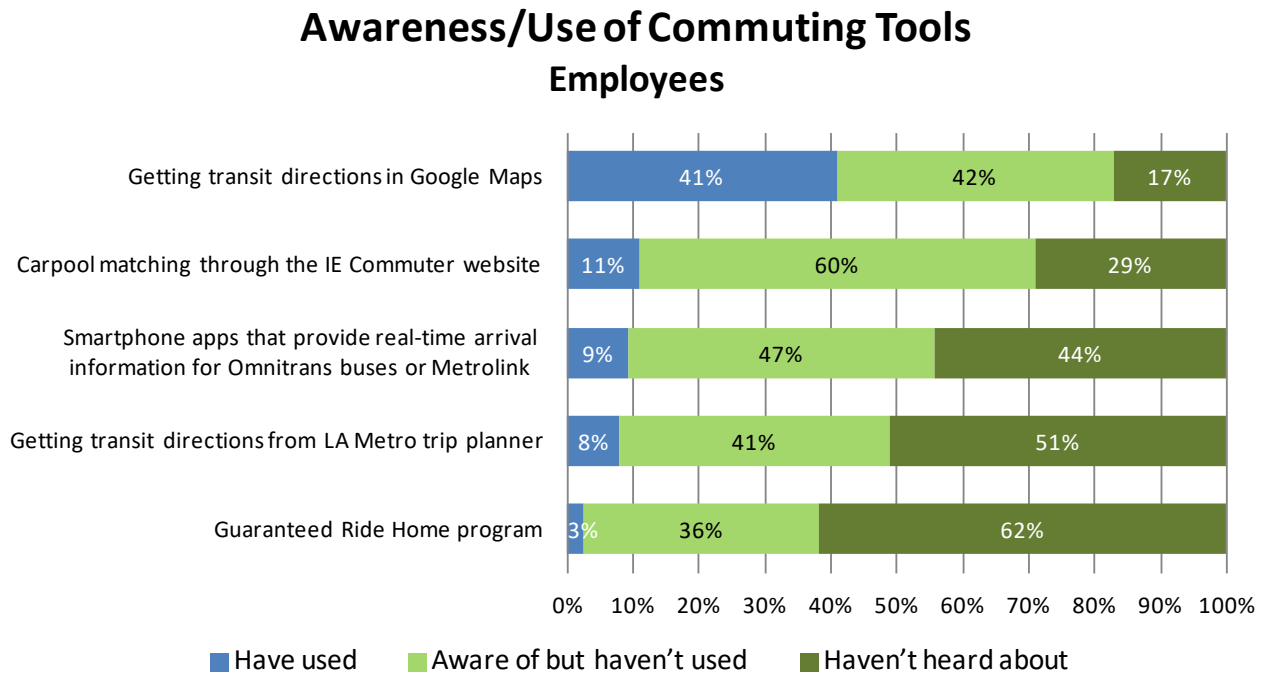
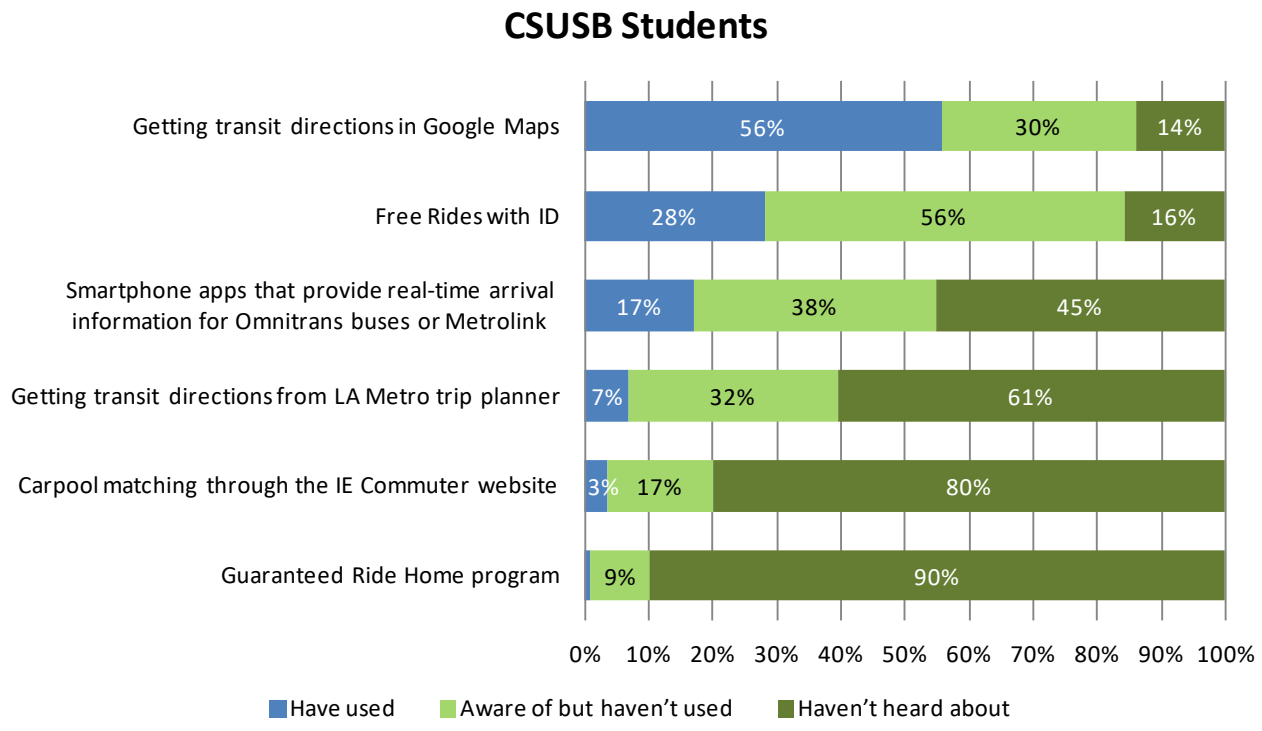


Figure 15, Students' Awareness and Use of Commuting Tools



There are a number of tools already in place to help commuters find and use alternate modes. Respondents were asked if they were aware of and/or had used these tools. Figures 14 and 15 show, for employees and CSUSB students, the percentage of respondents who had used each tool, were aware of but had not used the tool, or hadn't heard about the tool.

The tool with the highest awareness and use was getting transit directions in Google Maps. Over 80% of respondents said they had used (41% of employees and 56% of students) or were aware of this tool (42% and 30%). A smaller number had used (8% of employees and 7% of students) or were aware of (41% and 32%, respectively) the Metro Trip Planner.

A large segment of the employee sample (71%) was aware of IE Commuter as a source of carpool matching, but only 11% had used it. Only 20% of students were aware of (17%) or had used (3%) IE Commuter.

More than half of the two samples were aware of smartphone apps that provide real-time transit arrival information. Among employees 9% had used such apps and among students 17% had.

Students at CSUSB have a prepaid transit benefit and were asked if they had used it to ride free with their college ID. Twenty-eight percent (28%) had ridden with their ID and another 56% were aware that they could. Only 16% were unaware of the opportunity.

The lowest awareness among both groups was for the Guaranteed Ride Home Program, which most of the employee respondents have available through their employer or IE Commuter. Only 39% of employees were aware of (36%) or had used (3%) this benefit. Among students, only 10% were aware of (9%) or had used (1%) such a program. This is significant as we will see later that a Guaranteed Ride Home program can be an important factor in overcoming a barrier to ridesharing or transit use.

Focus Group Input

The focus groups reinforced these findings regarding awareness and use of commute tools. Numerous participants described personal circumstances that changed their commute "calculus" and where they potentially found themselves in a position to revisit how they commuted to work. Examples included the retirement of a carpool partner, changing job location and changing job hours, a one-car family for some period of time or simply a desire for a less stressful commute option for some trips on some days. In such instances, focus group participants indicated that driving alone was generally the default because they weren't aware of or weren't comfortable with commute tools to help them discover alternatives.

Transit Information Tools

All participants used Google Maps for driving directions. Many were aware that you can also get transit directions and quite a few had tried it. In some cases, it had shown them just how difficult or long their transit trip might be.

One respondent noted that Google Maps shows you the fare for Metrolink but not for the connecting buses — he wanted to see the complete fare for the trip. Those who were transit users and had used the real-time NextBus app valued the information, but said it is not always accurate. Despite these limitations, they all

agreed that having a trip planner like Google Maps and real-time information was a major improvement over having to visit multiple websites or read paper schedules, which were often "hard to figure out."

Guaranteed Ride Home

Many of the focus group participants who worked for the county or other employers, who offer a guaranteed ride home benefit, were simply unaware of this program. When the current reimbursement program was described to them, they found it only somewhat appealing. Their concerns centered on the cost of the ride and how long it would take to arrange in an "emergency." However, when the concept of a prepaid Uber/Lyft/taxi ride that could be requested by the ETC at their work site was floated, they felt that it would greatly increase their likelihood of considering ridesharing or transit.

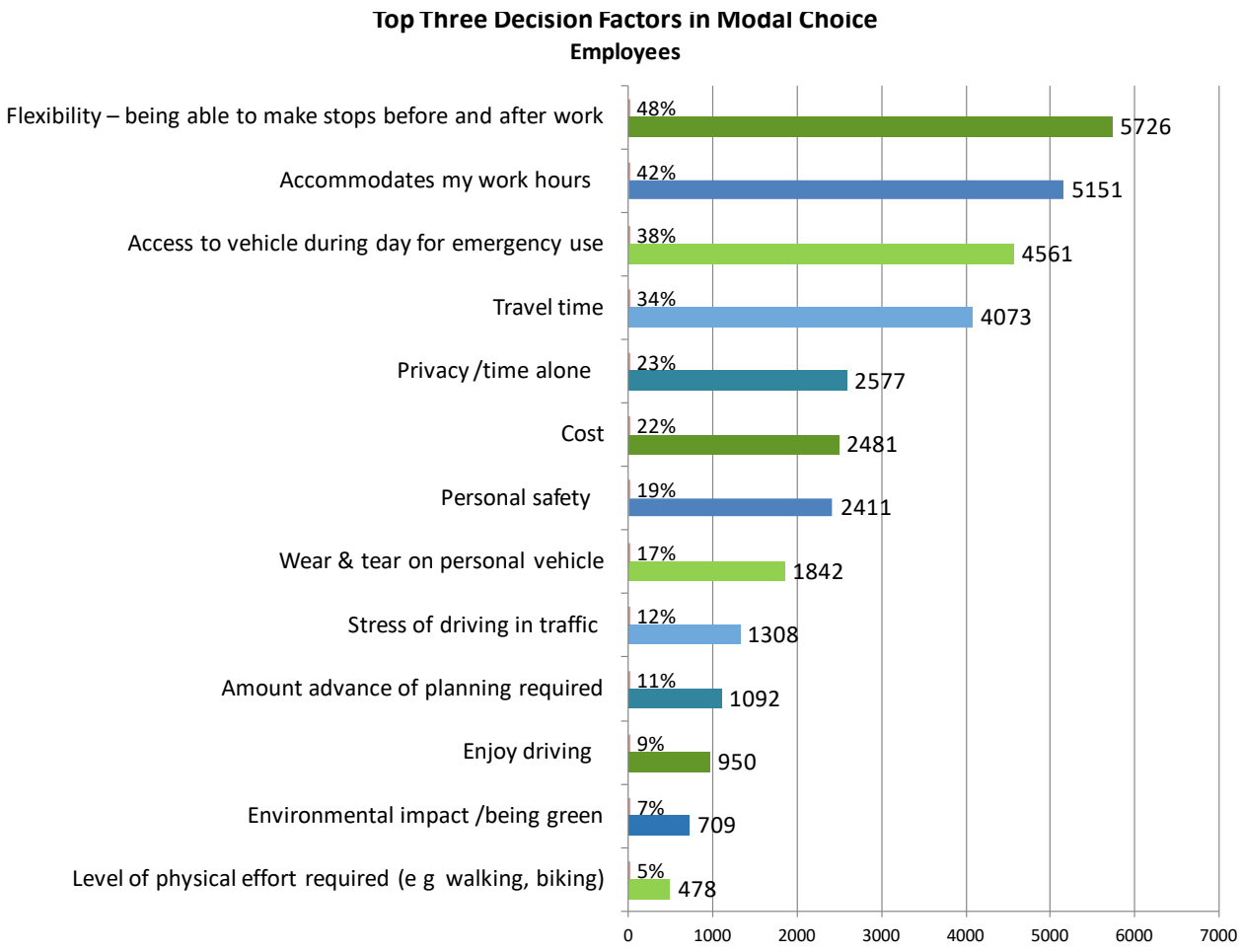
For many of the respondents, however, either the need for flexible work hours or the need for a vehicle during the day still make ridesharing impossible.

IE Commuter

Only a few of the focus group participants had used IE Commuter and most of those said that they had found it difficult to use or simply had been unable to find an appropriate match. Most of the carpoolers we spoke with found their own carpool partners from among co-workers or family members.

Modal Choice Motivations - EMPLOYEES

Figure 16, Employees' Top Factors in Modal Choice



Key Factors in Modal Choice Decisions by Employees

All respondents were asked to select the top three factors in their modal choice decision. Figure 16 shows the "score" for each factor (based on 3 points for a first place ranking, 2 points for a second place ranking, and one point for a third place ranking). It also shows the percentage of all respondents who included the factor in their top three.

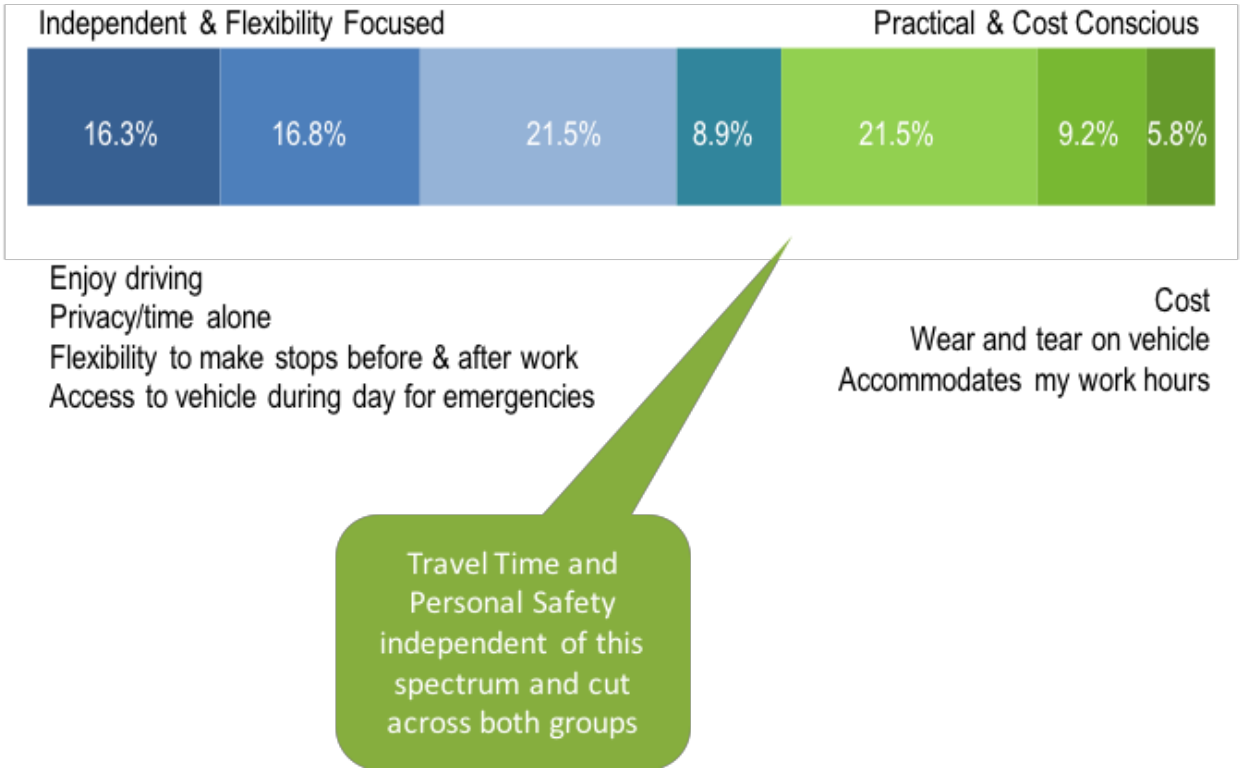
The top three items — flexibility (48%), accommodates my work hours (42%) and access to a vehicle for emergency use (38%) all relate to being able to "come and go when I want." The next two factors of travel time (34%) and privacy/time alone (23%) also tend to encourage driving alone.

Smaller groups prioritized cost (22%), wear and tear on one's vehicle (17%) and the stress of driving in traffic (12%), factors that tend to encourage alternate mode usage.

The smallest groups prioritized the environment and exercise as among their top three factors.

Motivational Continuum for Employees

Figure 17, The Motivational Continuum



Based on Three Most Important Mode Choice Factors

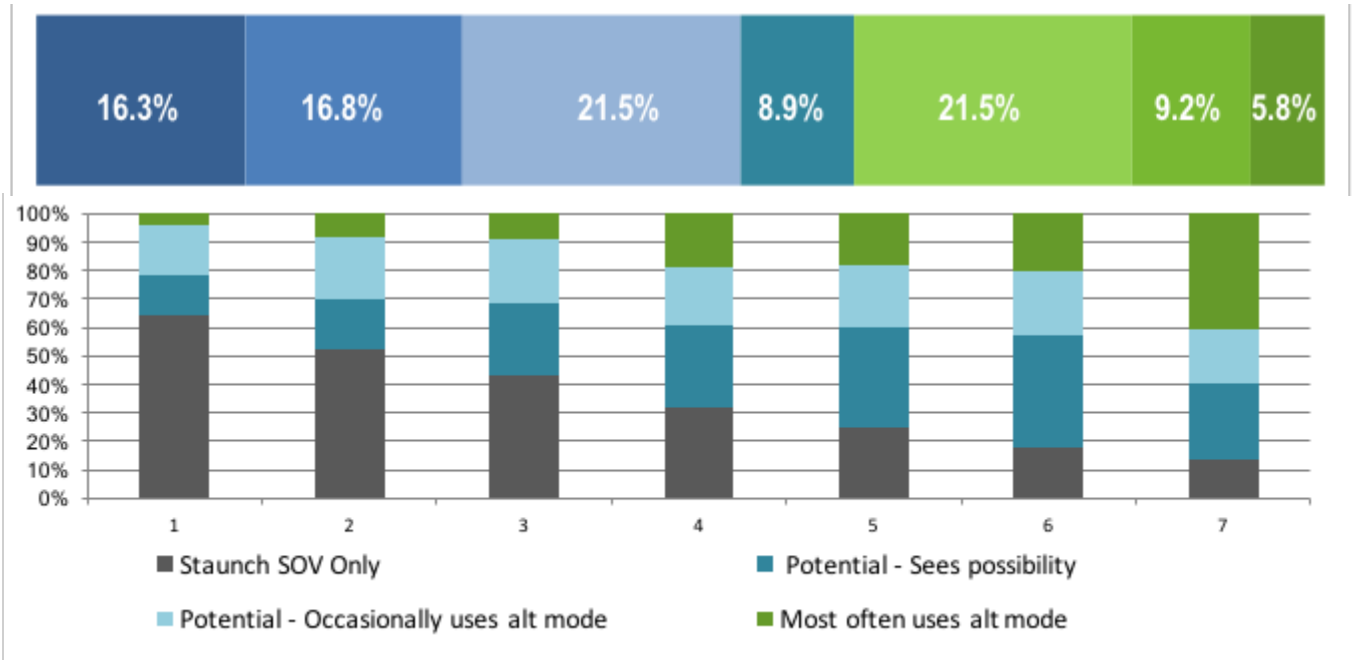
To understand how a person's perceived motivations related to their willingness to consider an alternate mode, we created a correlation matrix and used factor analysis. The result was the continuum shown in Figure 17, which accounts for 86% of all employee respondents.

- At the left end of the continuum are those who prioritize independence and flexibility. Their key motivations are enjoy driving, enjoy privacy/time alone, want the flexibility to make stops before and after work, and want access to a vehicle during the day for emergencies.
- At the right end of the continuum are individuals who prioritize cost and wear and tear on their vehicle, but also the ability to accommodate their work hours.

Where an individual falls on the continuum depends on how strongly they identify with one mindset or the other. The 8.9% shown in teal in the middle have some characteristics of each.

Importantly, travel time and personal safety are independent of this continuum. These factors tend to cut across both groups. A mode must be safe and offer a reasonable travel time for anyone to consider it.

Figure 18, Motivational Continuum for Employee Commuters



Motivational Continuum and Alt Mode Potential among Employees

Figure 18 demonstrates a very direct relationship between one's motivational mindset and use of or willingness to consider using an alternate mode. Each column breaks down the individuals in the corresponding point on the continuum based on the segmentation discussed earlier — SOV Only, Potential, Potential/Has Used and Current Alternate Mode User.

Those with the strongest Independence/Flexibility focus are the most likely to be staunch SOV-only drivers. As you move towards the Practical/Cost Conscious end of the continuum, respondents are more and more likely to be current or potential alternate mode users.

From a marketing perspective, efforts to change commute behavior have the greatest chance of success if focused on the practical/cost-conscious commuter.

Focus Group Input

The focus groups with employees clearly supported the premise of the continuum. Participants who prioritized flexibility were a very hard sell for any alternate mode usage. They cited numerous reasons that they needed to drive alone:

- Work hours that varied unpredictably;
- Need for a car during the day for errands, work use or emergencies;
- Need to make stops on the way to and from work; and
- Unwillingness to be limited by the schedules and needs of others.

Among the primary flexibility factors that cause commuters to reject ridesharing and transit use are the demands of school-aged children who must be dropped off and picked up, as well as responded to in the event of an emergency. While a few respondents had found ways to work around these needs (such as

dropping off kids before meeting the rideshare partner and having the spouse pick them up), others had tried and failed (such as a mother who can only leave her children at school after a certain time, leaving insufficient time to use transit).

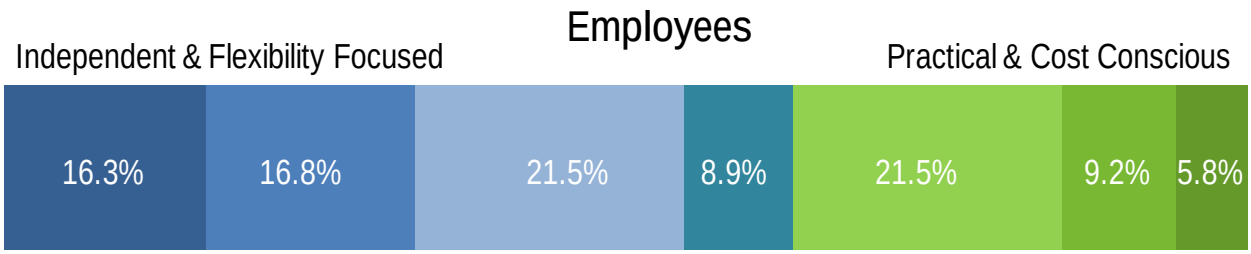
Those who prioritized cost were much more open to using transit or ridesharing. However, cost is a motivator that waxes and wanes with the price of gas and the cash incentives available through employers. With current low gas prices, and in the absence of cash incentives, the cost savings related to not driving are not great enough to justify the extra travel time required for transit use or the extra coordination required for ridesharing. At least a few focus group participants mentioned buying fuel-efficient cars to economize rather than ridesharing or using transit.

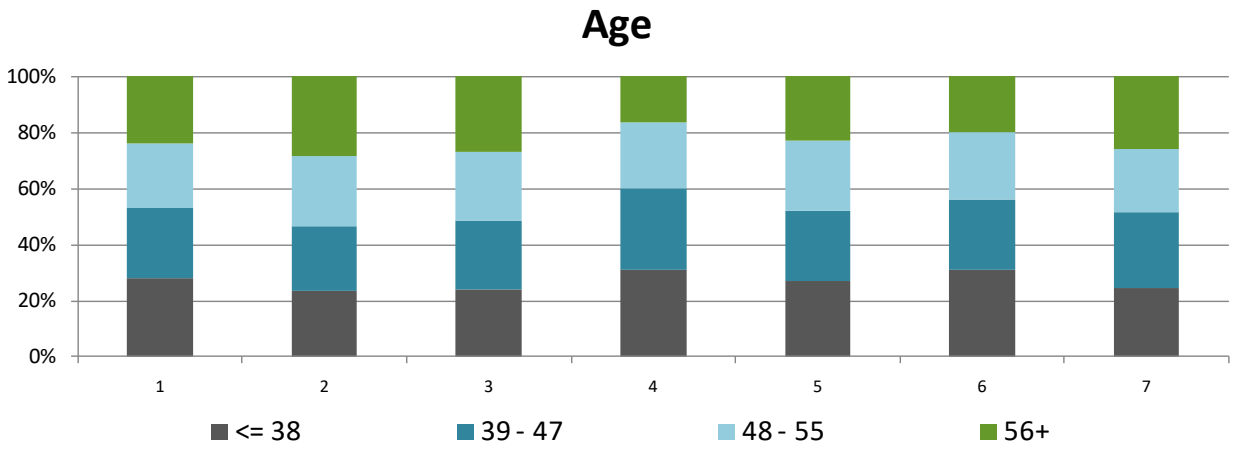
Motivational Continuum and Demographics of Employees

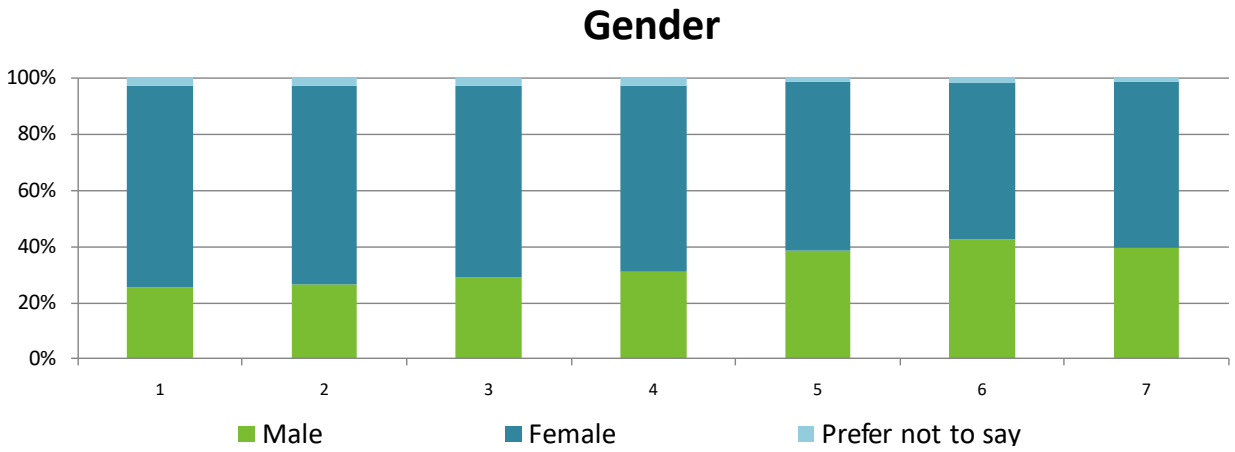
Figure 19 examines the demographics — age, gender and income — of each segment of employees on the continuum.

As you will see, there is little relationship between age or income and commuter mindset. There is somewhat of a relationship with gender. Those on the practical/cost-conscious end of the spectrum are somewhat more likely to be male (40%) than those on the independence/flexibility end (26%). However, all segments are majority female, as is the total sample.

Figure 19, Demographics of Employees







Travel Time

As previously noted, travel time is a factor that cuts across the continuum. A reasonable travel time, like safety, is a prerequisite for considering a mode. What is considered reasonable varies among individuals, but, based on prior research and the focus groups, tends to be no more that 1.5 to 2 times as long as driving alone.

Figure 20 shows the average perceived travel time for each of the employee sample segments. The average ranges from 25 minutes for SOV-only drivers to 35 minutes for carpools. However, for transit users, it is 56 minutes. Ask how long their commute would take if they drove alone, carpoolers say it would save them less than 2 minutes. Transit riders say it would save them 35 minutes. The disparity in travel time is a significant barrier to increasing transit usage.

Figure 20, Average Travel Time of Employees

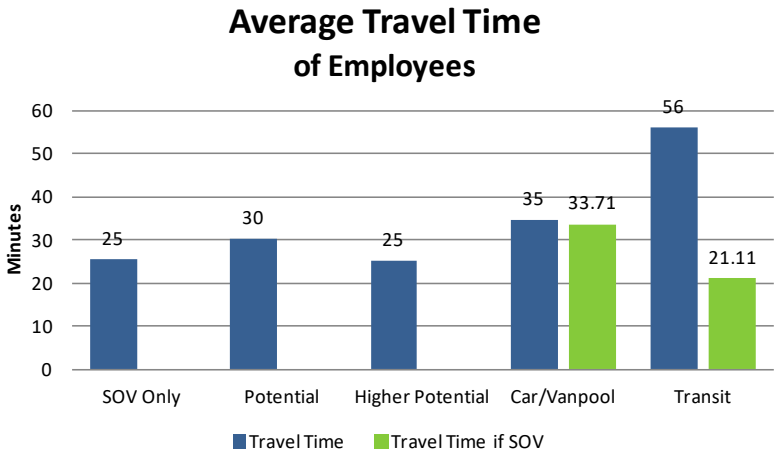
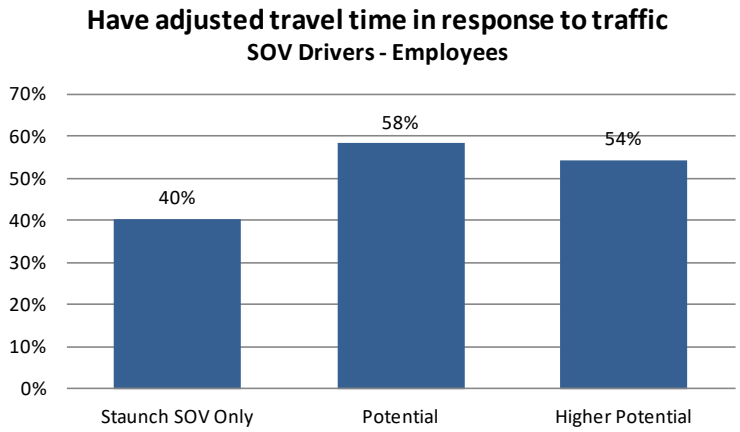


Figure 21, Adjustments to Travel Time



Looking at travel time from a different perspective, SOV drivers were asked if, during the past year, they had adjusted the time they traveled to or from work in response to increased traffic (Figure 21). About half of them had. SOV drivers who were open to the idea of using another mode were much more likely to say they had changed their commute time (54% to58%) than were SOV-only drivers (40%). This may indicate that worsening traffic is a reason for some to consider other options.

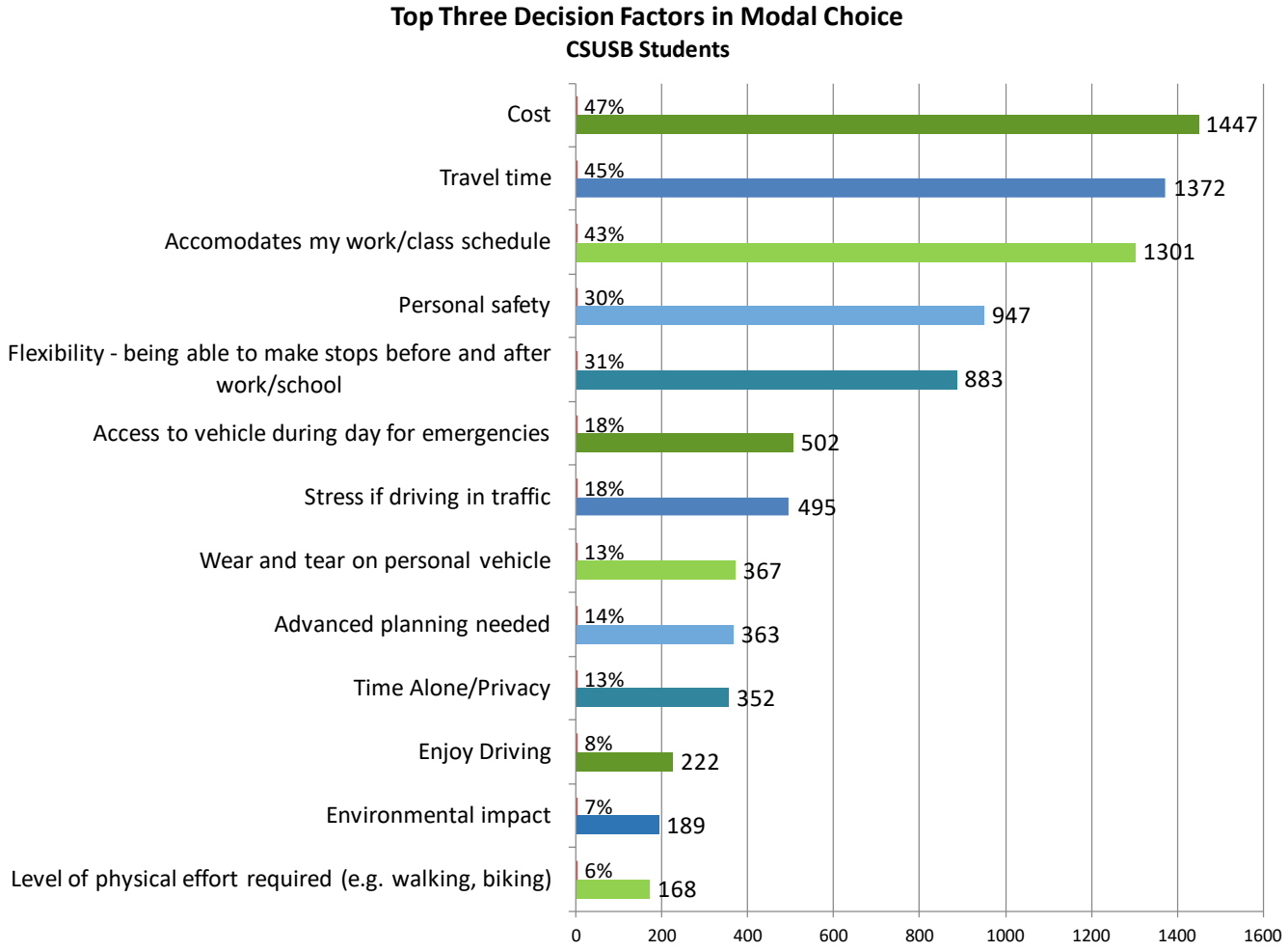
Focus Group Input

One focus group participant who commuted from Lake Elsinore to Rancho Cucamonga was a classic example of the tendency to adjust travel time to avoid traffic. This gentleman had gradually left home earlier and earlier and stayed at work later and later, now with a 14-hour day door-to-door, in order to avoid the commute peak periods.

Another participant had addressed the issue of worsening traffic in a different way. She had made the decision to pass up job opportunities that would increase her drive-alone commute time. She felt that her career had been limited by these choices.

And a third participant had simply moved within walking distance of her job, even though it greatly increased her rent.

Figure 22, Students' Top Factors in Modal Choice



MODAL CHOICE MOTIVATIONS – CSUSB

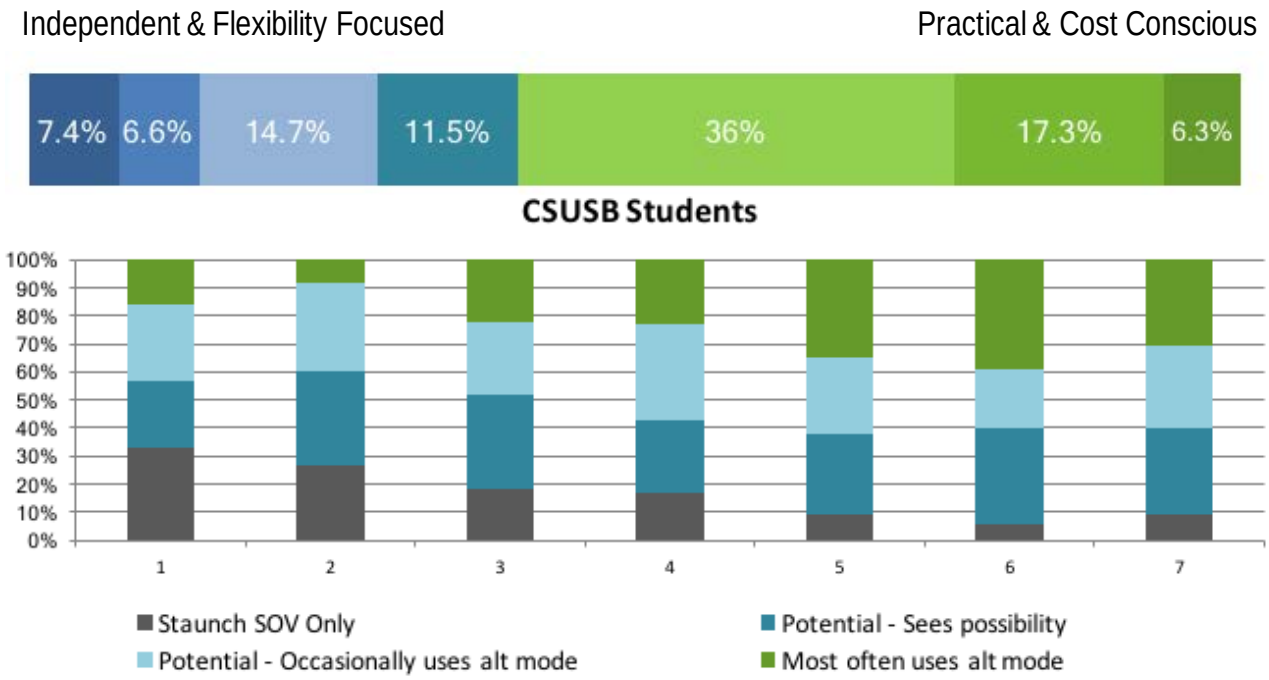
Modal Choice Decisions by Students

Students, like employees, were asked to select the top three factors in their modal choice decision (Figure 22). Their priorities are distinctly different from those of the older employee group.

The top three items for students are cost (47%), travel time (45%) and accommodates my work/class schedule (43%). The next tier of factors includes personal safety (30%) and flexibility (31%). This mix of motivations includes factors that favor alternate mode use (particularly cost) as well as factors that may not (travel time and flexibility).

As with the employees, the environment and exercise were prioritized by very few student respondents.

Figure 23, Motivational Continuum for Students



Motivational Continuum and Alt Mode Potential Among Students

The number one ranking of cost as a decision factor means that many more students than employees fall on the practical/cost-conscious end of the motivational continuum.

Again the chart above (Figure 23) demonstrates a direct relationship between one's motivational mindset and use of or willingness to consider using an alternate mode. As in the prior employee chart, each column breaks down the individuals in the corresponding point on the continuum based on the segmentation discussed earlier — SOV Only, Potential, Potential/Has Used and Current Alternate Mode User.

Those with the strongest Independence/Flexibility focus are the most likely to be staunch SOV-only drivers. As you move toward the Practical/Cost Conscious end of the continuum, respondents are more and more likely to be current or potential alternate mode users.

The difference with the students is that there is a stronger overall tendency to use or be open to using an alternate mode; hence, each point on the continuum includes a smaller percentage of Staunch SOV-only drivers. This tendency is supported by and/or the result of an underlying motivational mindset that prioritizes cost over flexibility and independence.

Figure 24, Rating Scale

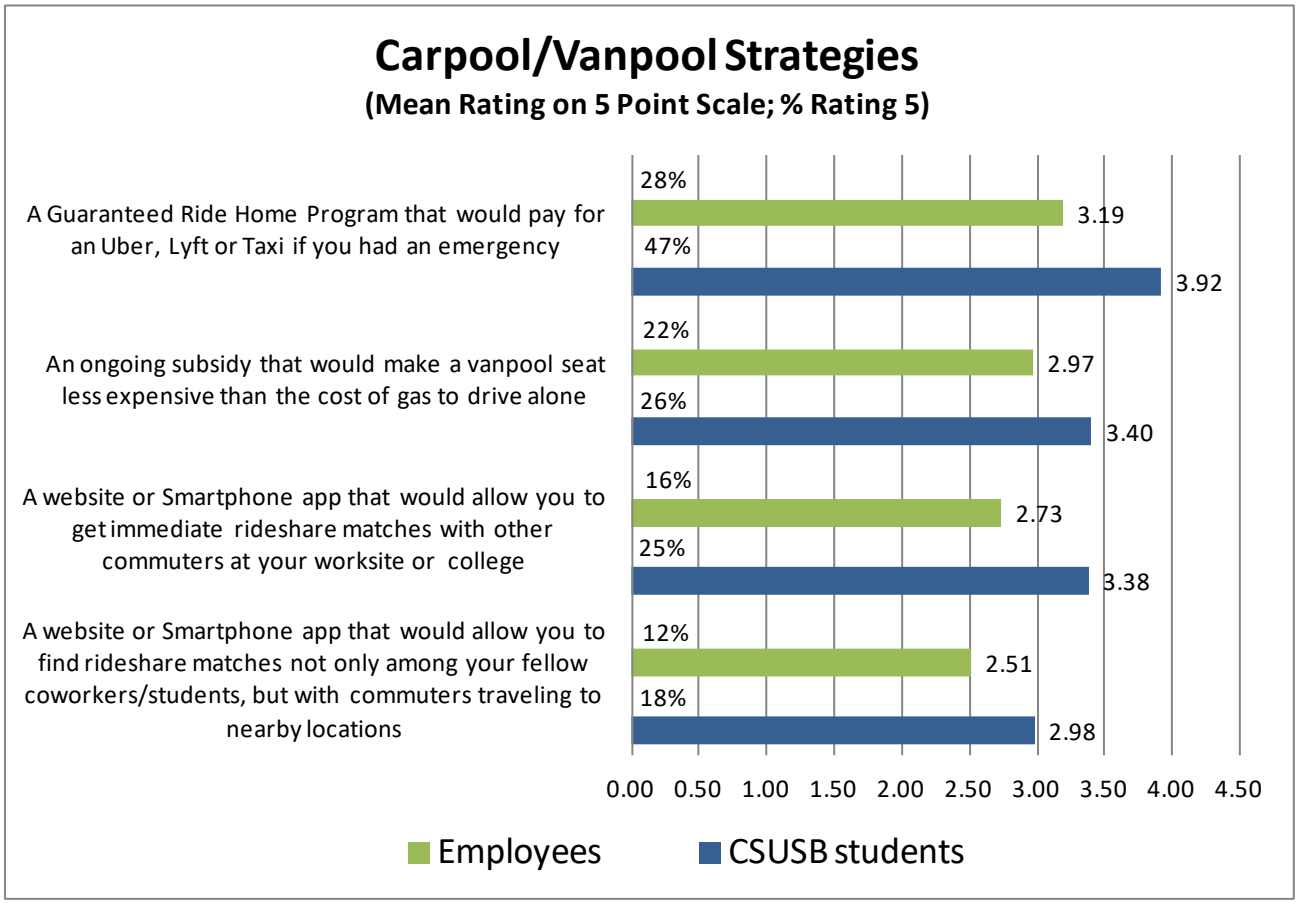
RESPONSE TO POTENTIAL STRATEGIES

Rating Scale
Would the following make you more likely to…
5 = Definitely would
4 = Very likely would
3 = Possibly would
2 = Probably would not
1 = Would make no difference

Depending on the modes which they had experience with or interest in, respondents were asked to rate the potential impact of a number of strategies designed to increase their utilization of a specific mode. Keep in mind that respondents were only asked questions about those modes which they have used or said they would be willing to consider. So the sample segment is different for each of the following sets of questions.

Figure 24 shows the rating scale that was used. The following charts show the mean responses for employees and students, based on this scale, as well as the percentage of each sample group that gave the strategy a rating of 5 (would definitely make me more likely to…).

Figure 25, Carpool and Vanpool Strategies



Carpool/Vanpool Strategies

Among the four carpool/vanpool strategies tested (Figure 25), a guaranteed ride home program received the highest mean score (3.19 for employees and 3.92 for students, respectively). More than one-quarter of employees (28%) and nearly half (47%) of students said this would definitely make carpooling or vanpooling more attractive to them. It is significant to note that most of the employees surveyed do in fact have a guaranteed ride home program, but, as we saw previously, they are unaware of it.

The next most positive response was to an ongoing vanpool subsidy. This received the top rating from 22% of employees and 26% of students and a mean rating of 2.97 and 3.40, respectively.

Website or smartphone apps that would facilitate rideshare matching appealed to smaller numbers of respondents, particularly the idea of being matching with those other than fellow employees or students.

Note that students rated each of the strategies higher (though by differing margins). This may be the result of their generally greater openness to alternate modes.

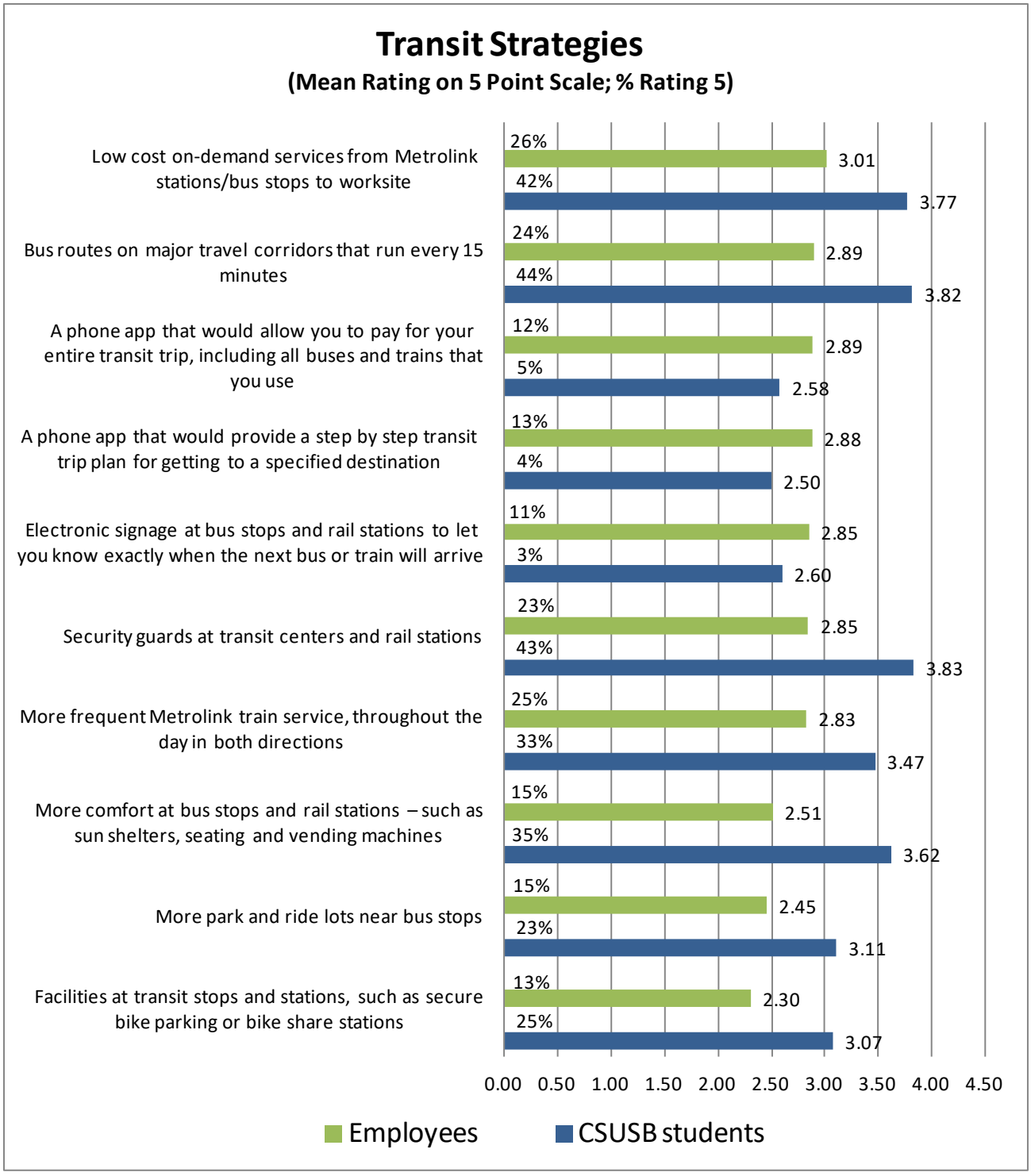
Focus Group Input

One of the primary purposes of the focus groups was to further test some key strategies with potential to increase alternate mode usage. Among the strategies explored in the focus groups was a multimodal, social media-styled Rideshare Platform. RideAmigos' Century City website was used as an example to demonstrate how such a platform might work.

Virtually all of the participants responded very positively to the RideAmigos website, describing it as "friendly," "intuitive" and "easy to use." Many said that they would definitely sign up, just to see what was possible. Specific comments and concerns included:

- Most participants responded very positively to the multimodal aspect of the website. They liked being able to compare options.
- It is important that the platform be regional but allow the user to decide how broadly they want to search. Some participants wanted access to a broader market to obtain a good rideshare match; many others wanted the security of only being matched with fellow employees. One woman wanted to be able to specify gender — only be matched with other women.
- The ability to check someone out on social media was considered a plus as the fear of riding with a stranger was significant.
- The ability to make short-term rideshare arrangements appealed to some participants — "when my car is in the shop," or "on days when I know I won't need my car for work."

Figure 26, Transit Strategies



Transit Strategies

A wide variety of transit-related strategies were tested with current and potential transit riders, as well as with respondents who regularly or occasionally carpool or vanpool (Figure 26). Again, students rate many

strategies higher, but also show priorities that are quite different from the employees, possibly reflecting their greater experience using transit.

Employees

The strategy that received the most positive response from employees was "Low-cost on-demand services from Metrolink stations/bus stops to work site." This concept received a mean score of 3.01 and is given a rating of five by 26% of employees. Among employees who use transit, at least occasionally, 29% gave it the top rating.

The next six highest-rated strategies received almost identical mean scores, but a very different distribution of responses.

"A phone app that would allow you to pay for your entire transit trip…" received a mean score of 2.89, but only 12% gave it the top rating (Would probably…). "A phone app that would provide step-by-step transit directions…" was rated very similarly, with a mean score of 2.88 and a top rating by 13%. "Electronic signage at bus stops and rail stations…" received a mean rating of 2.85, but a top rating from only 11% of respondents. All three of these information-related strategies received many ratings of "Possibly would… to Very likely would make transit a more attractive option." They are supporting rather than driving factors.

On the other hand, "Bus routes on major travel corridors that run every 15 minutes" received a similar mean rating of 2.89, but was rated in the top category by 24% — twice as many as the two phone apps. Among those who already use transit at least occasionally, it was rated in the top category by 67%.

Similarly, "More frequent Metrolink train service…" received a mean rating of 2.83, but a top rating from 25%. "Security guards…" received a mean rating of 2.85 and a top rating from 23% of respondents. Among those who use transit at least occasionally, these two strategies received top ratings from 29% and 33%, respectively.

"More comfort at bus stops and rail stations…" received a mean rating of only 2.51 and a top rating from only 15%. However, among those who use transit at least occasionally, it received a top rating from 49%.

"More park-and-ride lots…" and Bike "Facilities at transit stops and stations" were rated relatively weakly (means of 2.45 and 2.30, respectively), with low levels of top ratings even among transit users.

CSUSB Students

Among students, three strategies virtually tied for first place.

- "Security guards at transit centers and rail stations" (mean rating of 3.83 and top score of 43%).
- "Bus routes on major travel corridors that run every 15 minutes" (mean rating of 3.82 and top score of 44%).
- "Low-cost on-demand services from Metrolink stations/bus stops…" (mean score of 3.77 and top score of 42%).

These were followed by four strategies that students rated much higher than employees:

- "More comfort at bus stops and rail stations…" (mean score of 3.62 and top rating by 35%)
- "More frequent Metrolink train service…" (mean score of 3.47 and top rating by 33%)
- "More park-and-ride lots…" (mean score of 3.11 and top score of 23%)
- Bike "Facilities at transit stops and stations…" (mean score of 3.07 and top score by 25%).

Students gave lower ratings than employees to the three information strategies (phone app for trip planning, phone app for payment and electronic next bus signage.) This may be because they are already more familiar with these tools as we saw previously.

Focus Group Input

The primary transit strategies tested in the focus groups were the on-demand service from the downtown San Bernardino Metrolink Station/Transit Center to work sites, the concept of limited stop express bus routes and transit information apps.

The appeal of the on-demand service was limited to those who work in the downtown San Bernardino area. Among those individuals, it was attractive to many. Specific comments included:

- The idea of having the demand response vehicle meet the train or bus pulse was very attractive. "It would be very useful, because I don't like to linger at the transit center. Some people there worry me."
- Would be a good alternative to waiting for a bus because the buses aren't that reliable and you don't want to spend a lot of time waiting at the transit center.
- Concerns about cost — Would it be a cost in addition to the basic bus or train fare?
- Concerns about how long it would take — How would travel time be (affected by the number of people riding, sharing the bus?
- One respondent noted that the times for train service would have to be adequate first for people to have a need for the shuttle.

The concept of commuter express bus routes that provide limited stop service was attractive to a somewhat broader audience. Omnitrans Express Route 290 (San Bernardino Transit Center–Arrowhead Medical Center–Ontario Mills Mall–Montclair) and Route 208 (Yucaipa–Redlands Mall–San Bernardino Transit Center) were used as examples.

A few of the group participants were already taking advantage of Route 290 and said that "when it fits your trip and schedule, it's great." Several Yucaipa and Redlands residents were unaware of the Route 208 (which had only recently begun operation), but saw it as a potential option for them. Participants at the Arrowhead Regional Medical Center (ARMC) focus groups were interested in the potential for the Route 208 to travel all the way to Colton and ARMC.

Participants who had rejected transit because of excessive travel time said that the availability of an express bus that didn't take "too much longer than driving" would make them rethink the decision. The combination of park-and-ride facilities, no need to transfer and limited stops significantly broaden the attractiveness of transit. One participant noted that the experience of waiting at the bus stop would need to be improved — clean, good lighting and security — to make the service attractive.

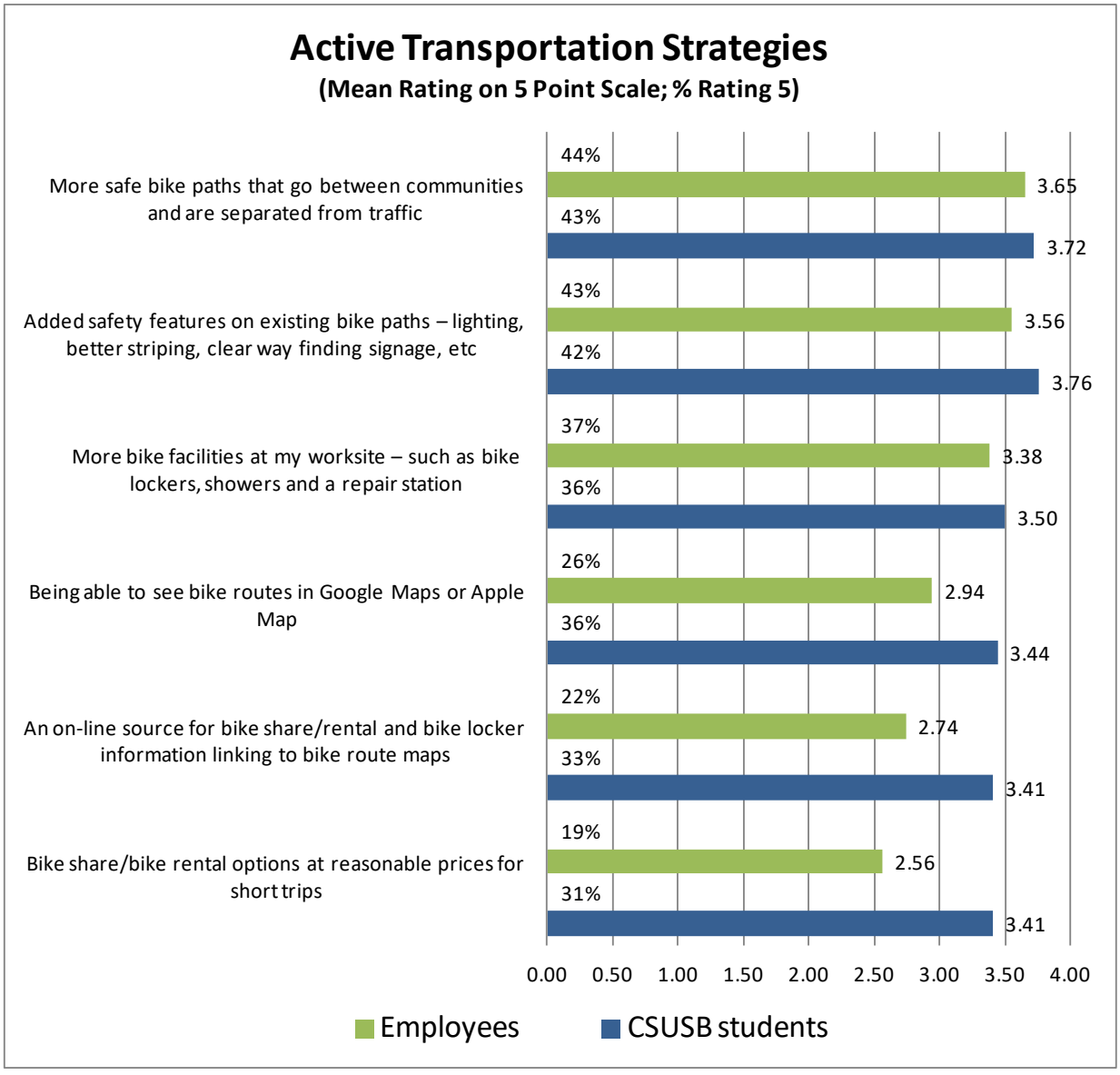
The focus groups also included a discussion of transit trip planning tools, such as Google Maps, the Transit App and NextBus. Quite a few of the participants had used one or more of the apps — most frequently Google Maps. Specific comments included:

- Real-time information is really important. But the text for NextBus needs to be easier to read and the information needs to be reliable on the NextBus app.

- Google Maps is great — Having the information right in my hand is very good.
- Tools like this (referring to Transit App) make transit a more viable option.

Those who hadn't used or weren't familiar with these apps were intrigued and felt that greater familiarity with them would make them more likely to explore their transit options. Several suggested that such greater familiarity would allow them to be open to alternate mode use at those times when job changes, job hours or auto availability opened the door to reconsidering the commute. At each focus group, as participants were leaving, many thanked us for the information, said they thought they had learned valuable things and for some, that they had new tools to revisit their commute choices.

Figure 27, Active Transportation Strategies



Active Transportation Strategies

As previously noted, those who bike or walk to work or college are a small segment of the population, particularly among the employee sample. However, they are the most enthusiastic alternate mode users and hungry for enhancements to the infrastructure to support active transportation. Keep in mind that only about 215 employees and 178 students were asked this set of questions — those that had expressed some interesting in biking or walking to work/college (Figure 27).

The strongest response was for enhancements to infrastructure for biking — "More safe bike paths that go between communities…" and "Added safety features on existing bike paths…" These received mean scores of 3.65/3.72 and 3.56/3.76 from employees and students, respectively, and were rated in the top category by 42% to 44% of respondents.

Almost as strong was the enthusiasm for "More bike facilities at my work site…", which got a mean score of 3.38/3.50 and top rating by 37% and 36% of employees and students, respectively.

Information tools such as "…Bike routes in Google Maps and Apple Maps" and "An online source for bike… information" were attractive to smaller segments of employees (26% and 22% gave these top ratings), but to more than one-third of students (36% and 33%).

The lowest rated strategy among employees was for "Bike share/bike rental options…" It received a mean score of only 2.56 and a top rating from only 19% of employees). However, among students, this strategy was rated 3.41 (similar to the two information strategies) and was given a top score by 31%.

Bikeshare would likely be more attractive to carpoolers and transit users for first-mile/last-mile options than for those who consider biking a commute mode of its own. For students, it might provide an option for getting around campus or off campus for lunch or errands.

Focus Group Input

A small number of focus group participants currently bike or walk to work or more would consider it if it were safer. Specific comments about biking:

- Concern about bike safety along Barton Road; need for more protected bike lanes. One Loma Linda participant described a recent bike fatality along the corridor.
- Overall feeling that biking in downtown San Bernardino would not be safe.
- One bike rider noted that for a short commute, bike travel time is about the same as for a vehicle, making it an attractive option.

The appeal of walking and biking as a commute mode, however, is limited; first by proximity – it is only practical for those who live reasonably close to their worksite — and further by personal factors. Many of the focus group participants would never consider biking because of the type of clothes they wear to work or the preference not to "get sweaty" on the way.

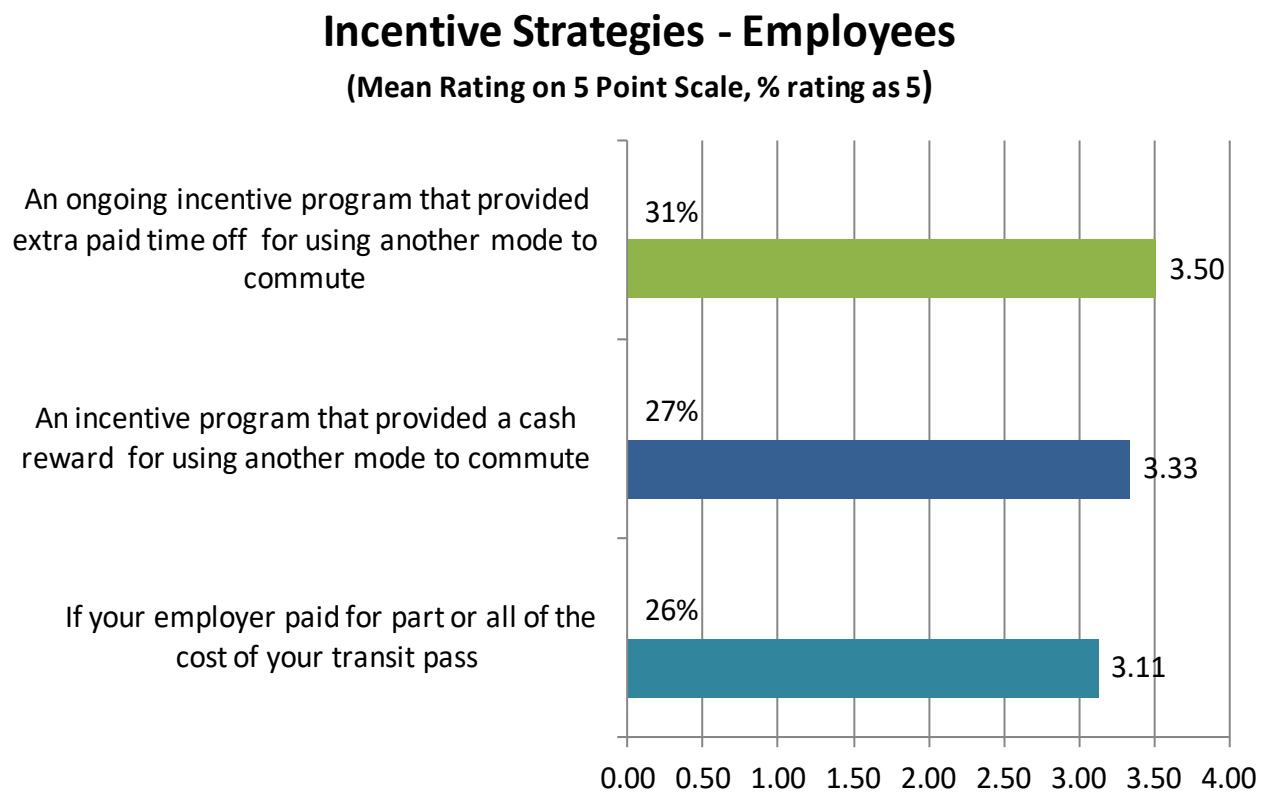
One bike-related concept tested in the focus groups was that of a bikeshare program in the Barton Road Corridor from Redlands to Loma Linda. As would be expected, its appeal was greatest with Loma Linda employees and others who work or reside along the corridor. Participants thought it would be valuable for a number of reasons:

- Lunchtime travel
- Use by hospital visitors
- Use by University of Redlands students
- Use by international LLUMC students who do not have vehicles
- ESRI employees — as the culture is bike oriented

In other focus groups, some participants were familiar with and liked the idea of a bikeshare program, but did not see it as valuable or viable in their own area. Virtually everyone agreed that the Redlands to Loma Linda Corridor was likely where the program would work best.

One participant who thought she would never use a bikeshare program suggested that a carshare program would be more useful, for example, in downtown San Bernardino.

Figure 28, Incentive Strategies for Employees



Incentives — Employees only

All employee respondents who were using or willing to consider using an alternate mode were asked about potential incentives. The incentives were very appealing to three out of 10 respondents (Figure 28).

Extra paid time off appeals to the most people. It receives a mean rating of 3.50, and 31% said it "would definitely make them more likely to use a mode other than driving alone."

A cash incentive is slightly less appealing with a mean score of 3.33 and 27%, saying it definitely would make them more likely…"

Having one's employer pay for part or all of the cost of a transit pass receives a lower overall score (3.11) but still gets the highest rating from 26% of respondents.

Focus Group Input

Focus group comments relating to incentives pointed to two key themes:

1. If an alternate mode is not reasonably convenient, incentives are not enough to get an individual to use it.

- In the words of one Loma Linda employee, "Incentives are good, but I wouldn't try an alternate mode if the travel were inconvenient."

2. While some commuters see intrinsic value in using an alternate mode (e.g., less stress), most feel that there has to be a reward to offset the extra effort.

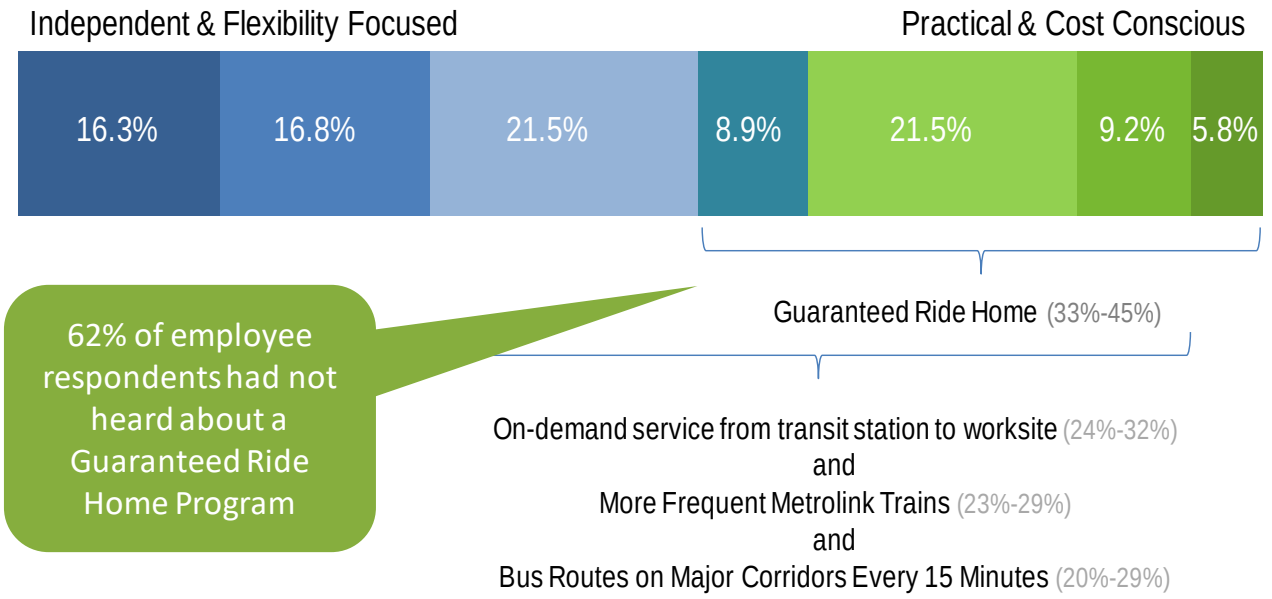
- "Why go through the hassle of trying alternate modes of commuting if there is no reward or benefit?"
- "My employer used to offer an incentive to rideshare, but doesn't anymore. I would [try it] if they did, but with low gas prices, it's not worth the hassle otherwise."

Participants responded differently to different benefits. For some, extra vacation time topped everything, while for others, cash was more attractive. For one woman, the idea of getting small rewards like Starbucks cards to share with carpool partners was appealing.

Several participants noted limitations in their employer's incentive programs. For example, you only get an incentive if you rideshare with a fellow employee and they cannot be a spouse. At least a few people said that they would carpool if the incentives were less restrictive.

Preferred parking spaces were described as a meaningful incentive by focus group participants in the few areas where parking is at a premium, notably at the Loma Linda University Medical Center Campus.

Figure 29, Strategies and the Motivational Continuum



Motivations and Strategies

Now we will look at how the ratings of strategies vary based on where employee respondents fall on the motivational continuum. We've already seen that those who are toward the Practical/Cost-conscious end of the continuum are more likely to consider using an alternate mode. Correspondingly, they also respond more positively to most of the strategies (Figure 29).

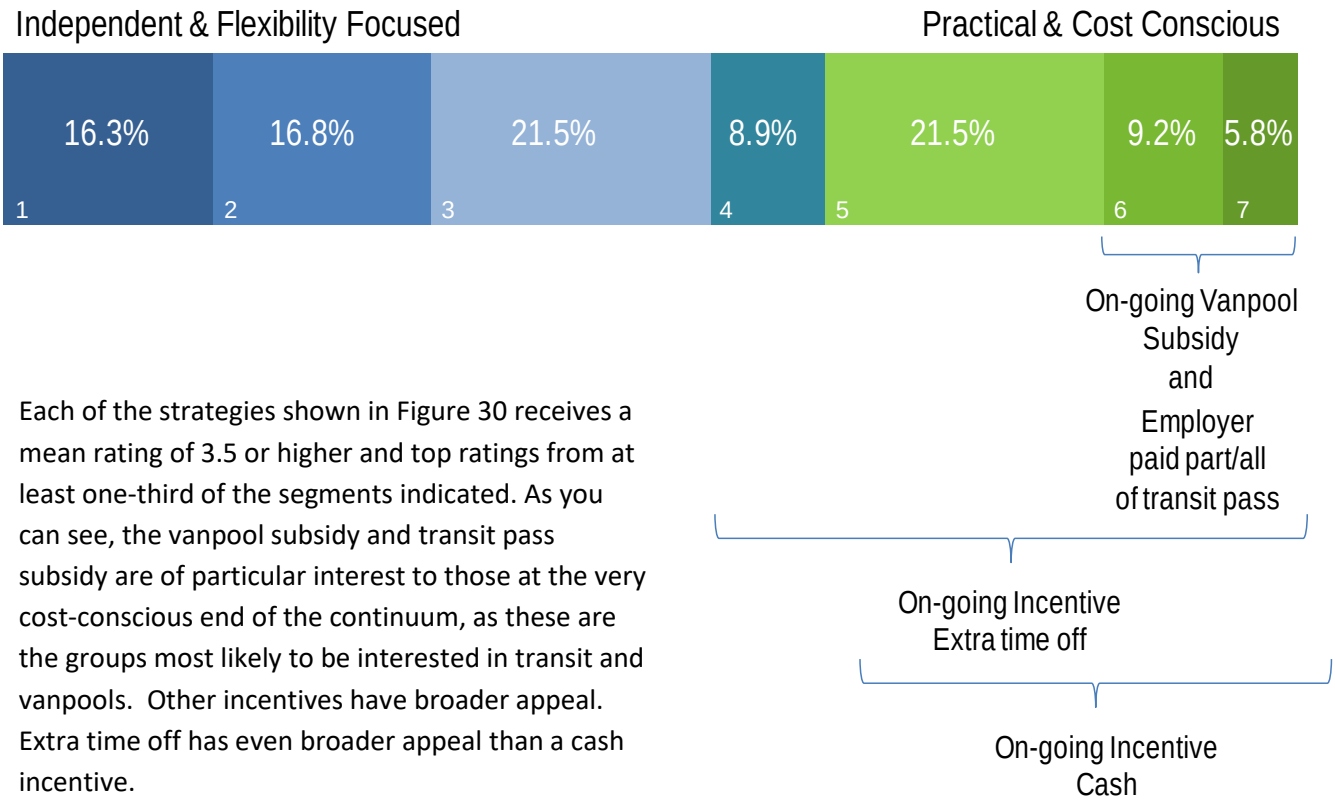
The Guaranteed Ride Home is particularly positive with employees at the right end of the spectrum. It receives the top rating from 45% of the most cost-conscious segment and top ratings of 37%, 34% and 33% of the next three segments. By comparison, it is rated in the top category by only 10% of the group at the Independence/Flexibility end of the spectrum.

The other three strategies highlighted here are popular with a somewhat broader segment, which ranges from segment three at the low end of the flexibility group to segment six, the second most cost-conscious group.

- "On-demand service from the transit station to the work site" receives the highest rating from 24 5 to 32% of respondents in this range.
- "More frequent Metrolink trains" receives the top rating from 23% to 29% of each segment in the range.
- "Bus routes on major corridors that run every 15 minutes" receives tops ratings from 20% to 29%.

This analysis holds true for the student sample as well. As we've previously seen, students are generally more enthusiastic about each of the strategies — but that enthusiasm is most pronounced at the right end of the continuum.

Figure 30, Incentives and the Motivational Continuum



Each of the strategies shown in Figure 30 receives a mean rating of 3.5 or higher and top ratings from at least one-third of the segments indicated. As you can see, the vanpool subsidy and transit pass subsidy are of particular interest to those at the very cost-conscious end of the continuum, as these are the groups most likely to be interested in transit and vanpools. Other incentives have broader appeal. Extra time off has even broader appeal than a cash incentive.

Again, the difference in ratings between the two ends of the spectrum is quite striking. For example, an ongoing cash incentive receives a top rating from only 16% of the most flexibility-minded respondents, but from 48% of those at the cost-conscious end of the spectrum.

Figure 31, Ratings of Active Transportation Strategies

Active Transportation Strategies (Mean Ratings)						
Employees / Students	Safe bike paths between communities	Added safety on existing bike paths	Bike share/rental options	Bike Facilities at Work	Bike Routes in Google Maps	On-line source for bike share/ rental
Independent /Flexibility Focused	3.39	3.17	2.39	3.22	2.56	2.58
	4.50	4.33	4.17	3.83	3.50	3.83
2	3.20	3.05	2.45	2.75	2.60	2.58
	3.78	3.89	3.44	3.56	3.22	3.33
3	3.62	3.67	2.43	3.73	2.96	2.82
	3.79	3.63	3.09	3.26	3.09	2.87
4	3.85	3.85	2.58	3.23	3.69	3.17
	3.86	4.00	3.64	3.86	4.00	3.93
5	3.62	3.55	2.74	3.54	3.04	2.69
	3.51	3.56	3.35	3.46	3.40	3.46
6	4.31	3.88	3.06	3.75	3.63	3.06
	3.00	3.20	2.95	2.85	2.80	2.65
Practical/ Cost Conscious	3.67	4.17	3.00	3.80	2.20	2.40
	4.38	4.13	4.00	3.88	4.13	4.00

Active Transportation Potential Small but Enthusiastic

As previously noted, the population of respondents using or interested in active commuting was small but highly enthusiastic about potential improvements. Figure 31 shows the mean ratings for each active transportation strategy by each segment on the motivational continuum, both employees and students. Here you see that even the flexibility-minded respond more positively to the strategies (though not as positively as the more practical/cost-conscious). Cycling is an alternate mode that allows one to remain more flexible without using a car. It should be noted, however, that the sample size here is small — 215 employees and 178 students.

APPENDIX A — LARGE EMPLOYER TRANSPORTATION DEMAND MANAGEMENT PROGRAM ELEMENTS

	City of Fontana	City of Ontario	City of Rancho Cucamonga	City of Redlands	San Bernardino County	Loma Linda University Medical Center	Loma Linda VA Hospital	ESRI	Stater Bros	California State University, San Bernardino	Inland Empire Health Plan
Employees	600-700	1100, 370 at City Hall area	350 FT, 120 PT	800 - maybe 300 in/ near City Hall	20K Countywide; 12K SB Valley	10K - MC, 3K - Univ	2000 at existing Loma Linda VAMC; 500 at new VA facility	2-3K	650 (distr cntr), 450 HQ	3-4K Emps, Nearly 20K students	2K employees, ave age 35
SBCTA Rideshare/ incentive program ($2/day - 3 mos)		Yes	Yes - they have 35 carpools		Yes	Yes		Yes	Yes	$2/day for 3 mos	Yes
Other Rideshare Incentive			$2/day ongoing for all modes	15 min vac for every day you use alt mode	$25-50 gas cards	10 gal of gas/mo	No sub for carpool; 77 carpools	No other incentives; culture is voluntary - make healthy lifestyle choices	No other incentive	$1/day on Coyote Card; all rideshare/ transit modes	$15 gift card to each enrollee quarterly; in drawing for 2-$25 gift cards
Victorville Vanpool program (ongoing subsidy)			No, tried in past		15-20 vans; VVTA, VRide, OCTA	6 vans	13-14 vanpools; fed benefit ($255)		Had a vanpool (OCTA) - was fradulent	2 vans from VVTA; Enterprise from Pasadena	A couple but difficult to sustain the 5+ riders needed given flexible start time schedules
Parking/Preferential Carpool or Vanpool Parking	Free/Yes	Free/Yes	Free/No	Free; spaces near city constrained	Free/Yes (225)/ Problematic at some sites (ARMC)	Free/Yes if available near work site	Free/Yes	Free 2053/Yes 75 (wait list for use)	Free/No	Paid $2.50/day; $102/qtr. Preferred for Carpool	Free; maybe a dozen vanpool spaces; some used.
Transit Benefit			$2/day ongoing	15 min vac per day	$16 subsidy ($12 for reduced)	$25/mo; Free Omni with ID for P&R	Fed Benefit - up to $255 A dozen take bus			Free rides on Omnitrans; ETC ensures student ID records current	See above re: $15 gift card; little transit use because of distance to #81, #82, Metrolink
Bike/Walk Benefit	Bike Racks; showers at fitness center		$2/day ongoing	15 min vac per day	Up to $240/yr for bike costs	$60/qtr		90 People rode bikes to work during RideShare week		$1/day on Coyote Card; only 6 enrolled	See above re: quarterly $15 gift card
SBCTA's ETC Support						They choose to work with ITS	Non-existent under PB		No contact after initial contact		
www.IECommuter.org		Informal Carpool matching	Employees do their own matching		Survey & Matching	For SB & RCTC incentives	Use Ridelinks for ride matching	Rideshare Matching		Use Ridelinks for matching; refer to IECom for broader match	Report no follow-up when asked about ridematches from other employers
Guaranteed Ride Home program	City vehicle	Yes (IE Commuter)	Do own with city car		Yes (IE Commuter)	Yes			Yes (IE Commuter)	Do their own, using staff	Partnered with Enterprise; nearby. Have used maybe 2x
Bike parking/locker/shower facilities		Some bike racks	Bike racks; purchasing elec bikes, gym with showers	People keep bikes in offices; no lockers	Bike lockers; keyed cage; no showers.	Secure bike room, lockers, some showers	25 bike lids, all reserved. Safe to bike & walk in Loma Linda; many employees live close	7 bikes for bikeshare; locked shed for parking bikes; gym with showers; bike coop in Redlands run by ESRI employees		Bike racks and repair station	Interior storage/ lockers; showers
Other	No bike lanes; people ride on sidewalk. One-quarter mile to Metrolink, sidewalk; Pacific Electric Trail goes by office.		City manager acquired 2-3 electric bicyles for city employee sue during the day/ to locations around the city	More open to active transp than public tranist; heavy cycling community	Hybrid carpool program using fleet cars; only 2 participants. One time incentive of $250 to buy zero emission car. Dual incentives to those in wellness program. Annual Rideshare Luncheon; Planning super-commuter program with gifts	ITS for Survey & matching; considering Zimride; can only ridehsare with other LL employees		Internal Bike email list with 130 employees listed	Only interviewee who does not do survey; seemed completely unaware; gives out rideshare forms at all training sessions. All emps retrained every 2 years	New Employee orientation; online tracking log	Difficult distance between Milliken and Haven and 2 miles to Metrolink. Increase in Metrolink fares makes train expensive. Number of San Bernardino employees (prior location); Victor Valley