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MTI Report S-09-02

MINETA
TRANSPORTATION INSTITUTE
Created by Congress in 1991

MINETA TRANSPORTATION INSTITUTE

The Norman Y. Mineta International Institute for Surface Transportation Policy Studies (MTI) was established by Congress as part of the Intermodal Surface Transportation Efficiency Act of 1991. Reauthorized in 1998, MTI was selected by the U.S. Department of Transportation through a competitive process in 2002 as a national "Center of Excellence." The Institute is funded by Congress through the United States Department of Transportation's Research and Innovative Technology Administration, the California Legislature through the Department of Transportation (Caltrans), and by private grants and donations.

The Institute receives oversight from an internationally respected Board of Trustees whose members represent all major surface transportation modes. MTI's focus on policy and management resulted from a Board assessment of the industry's unmet needs and led directly to the choice of the San José State University College of Business as the Institute's home. The Board provides policy direction, assists with needs assessment, and connects the Institute and its programs with the international transportation community.

MTI's transportation policy work is centered on three primary responsibilities:

Research

MTI works to provide policy-oriented research for all levels of government and the private sector to foster the development of optimum surface transportation systems. Research areas include: transportation security; planning and policy development; interrelationships among transportation, land use, and the environment; transportation finance; and collaborative labor-management relations. Certified Research Associates conduct the research. Certification requires an advanced degree, generally a Ph.D., a record of academic publications, and professional references. Research projects culminate in a peer-reviewed publication, available both in hardcopy and on TransWeb, the MTI website (http://transweb.sjsu.edu).

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The educational goal of the Institute is to provide graduate-level education to students seeking a career in the development and operation of surface transportation programs. MTI, through San José State University, offers an AACSB-accredited Master of Science in Transportation Management and a graduate Certificate in Transportation Management that serve to prepare the nation's transportation managers for the 21st century. The master's degree is the highest conferred by the California State University system. With the active assistance of the California Department of Transportation, MTI delivers its classes over a state-of-the-art videoconference network throughout the state of California and via webcasting beyond, allowing working transportation professionals to pursue an advanced degree regardless of their location. To meet the needs of employers seeking a diverse workforce, MTI's education program promotes enrollment to under-represented groups.

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MTI promotes the availability of completed research to professional organizations and journals and works to integrate the research findings into the graduate education program. In addition to publishing the studies, the Institute also sponsors symposia to disseminate research results to transportation professionals and encourages Research Associates to present their findings at conferences. The World in Motion, MTI's quarterly newsletter, covers innovation in the Institute's research and education programs. MTI's extensive collection of transportation-related publications is integrated into San José State University's world-class Martin Luther King, Jr. Library.

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USING BICYCLES FOR THE FIRST AND LAST MILE OF A COMMUTE

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16. Abstract

Bicycle ridership as a partial or total workday method of commute is increasing in popularity. With that increase in cyclists comes challenges for transportation agencies: how can the needs of cyclists fit seamlessly with the needs of non-cyclists, especially those utilizing light rail and commuter rail such as Caltrain?

On June 3, 2009, MTI, the Commonwealth Club of California and the United States Department of Transportation sponsored "Using Bicycles for the First and Last Mile of a Commute" in San José. Co-sponsors of the event included Caltrain, Bay Area Metropolitan Transportation Commission (MTC), Silicon Valley Bicycle Coalition, Silicon Valley Leadership Group, and Valley Transit Authority (VTA).

Introducing keynote speaker Carl Guardino was MTI's Executive Director Rod Diridon, Sr. A panel discussion, moderated by newspaper columnist Gary Richards included Dr. Kevin Krizek from the University of Boulder, MTC's Sean Co; Federal Transit Administration representative Alex Smith, San Francisco Bicycle Coalition founder Shirley Johnson, Silicon Valley Bicycling Coalition Executive Director Corinne Winter, City of San José Bicycle and Pedestrian Program Coordinator John Brazil, and Caltrain Special Assistant to the CEO Mark Simon.

This e-book is an edited summary of those proceedings.

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• John Brazil, coordinator, City of San José Bicycle and Pedestrian Program

• Sean Co, transportation planner, Metropolitan Transportation Commission

• Shirley Johnson, leader of Bikes on Board

• Kevin Krizek, associate professor of planning and design, University of Colorado

• Mark Simon, special assistant to the CEO, Caltrain

• Alexander Smith, United States Department of Transportation Federal Transit Administration

• Corinne Winter, executive director, Silicon Valley Bicycle Coalition

Thank you to keynote speaker Carl Guardino, president and CEO, Silicon Valley Leadership Group, and event moderators Rod Diridon, executive director, MTI, and Gary Richards, *San José Mercury News* “Mr. Roadshow” columnist and faculty member, MTI’s Master of Science in Transportation Management at San José State University.

The event, which was sponsored by MTI, the Commonwealth Club of California, and the United States Department of Transportation Federal Transit Administration, and co-sponsored by organizations including the Bay Area Metropolitan Transportation Commission, Caltrain, Silicon Valley Bicycle Coalition, Silicon Valley Leadership Group and Valley Transportation Authority, was held on June 3, 2009, in San José, California.

MTI staff instrumental in producing the event and in production of this e-book include MTI’s Director of Communications and ITT Donna Maurillo, Student Publications Assistant Sahil Rahimi, and Student Webmaster and Technical Assistant Ruchi Arya. Transcription services were provided by the Commonwealth Club of California, with editing and publication production services by Catherine Frazier.

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FOREWORD

There is no doubt that bicycle ridership as a partial or total workday commute is on the increase. Among the challenges faced by transportation planners is how to best meet the needs of bicycle commuters on existing public transit modes, mostly light rail and commuter rail such as Caltrain, while minimizing negative public perception of bicyclists.

In co-sponsoring its second bicycle summit, “Using Bicycles for the First and Last Mile of a Commute,” the Mineta Transportation Institute provided a public forum where transportation policy makers and planners, bicycle commuters and other community members can come together and discuss concerns and needs of San Francisco Bay Area bicycle enthusiasts.

The focus of this year’s summit was exploring ways for cyclists to best integrate cycling with existing forms of commuter transit, discussing best practices (and current frustrations) with bicycle access and egress from those transportation modes. What improvements to roadways are needed to encourage cyclists to use their bikes for transportation to existing commuter transit systems? How can surface transportation planners serve both automobile and cyclists on streets, expressways and highways? What facilities are needed on transit vehicles to encourage cyclists to use commuter rail, light rail or even buses to complete their rides to and from work? Perhaps most importantly, what can be done to foster goodwill between cyclists and non-cyclists on the streets and when using mass transit?

A summit such as this does not provide quick and easy answers. However, it is the best way for a dialogue to begin among stakeholders—transportation planners, cyclists, and the various transit agencies who are being called upon to meet the needs of an increasingly diverse transit-using population.

I would like to thank the event speakers and panelists, and offer my sincere appreciation to the event co-sponsors. Without the efforts of each of you, important dialogues such as this simply would not take place.

Rod Diridon, Sr.
Executive Director, MTI

EXECUTIVE SUMMARY

Bicycle ridership as a partial or total workday method of commute is increasing in popularity. With that increase in cyclists comes challenges for transportation agencies: how can the needs of cyclists fit seamlessly with the needs of non-cyclists, especially those utilizing light rail and commuter rail such as Caltrain?

The Mineta Transportation Institute (MTI) has been instrumental in encouraging a necessary dialogue between cyclists and public transit operators. This is the second bicycle summit produced by MTI, and this year's dialogue between cyclists, interested members of the community and transit operators focused on ways that bicycle commuters can best be integrated into existing systems, especially commuter rail. What do cyclists need from transit operators in order to seamlessly integrate public transportation into their workday commutes? What can surface transportation managers do to encourage cycling and increase the safety of cyclists who are sharing the road with automobiles? What facilities are needed at transit stations and aboard transit vehicles to help commuters complete their trips to work?

On June 3, 2009, MTI, the Commonwealth Club of California and the United States Department of Transportation sponsored "Using Bicycles for the First and Last Mile of a Commute" in San José, California. Co-sponsors of the event included Caltrain, Bay Area Metropolitan Transportation Commission (MTC), Silicon Valley Bicycle Coalition, Silicon Valley Leadership Group, and Valley Transit Authority (VTA).

Keynote speaker Carl Guardino, himself an avid cyclist, spoke about the needs of cyclists and what businesses can do to encourage their employees to include the use of a bicycle as part or all of their commute. He acknowledged the efforts of many key advocates of cycling who are making a difference in the public, nonprofit and private sectors. Those individuals include Silicon Valley Bicycling Coalition Executive Director Corinne Winter, San José Mayor Chuck Reed, City of San José Office of Economic Development Paul Krutko, Caltrans Director Will Kempton, Webcor CEO Andy Ball, VTA Vice-Chair Sam Liccardo, and VTA General Manager Michael Burns.

Following the keynote speaker, a panel discussion was moderated by Gary Richards, author of the "Mr. Roadshow" column in the *San José Mercury News*. Invited speakers included Dr. Kevin Krizek from the University of Boulder, who will be authoring an MTI study analyzing the access and egress methods as issues to transit; MTC's Sean Co, who spoke about legitimizing the use of bicycles as a form of transportation; Federal Transit Administration representative Alex Smith who talked about barriers to integrating the use of bikes with existing transportation modalities; leader of Bikes on Board, Shirley Johnson who presented highlights from the "Bikes on Board" project; Silicon Valley Bicycling Coalition Executive Director Corinne Winter who spoke about increasing the availability of bicycling facilities to encourage mass transit use by those cyclists; City of San José Bicycle and Pedestrian Program Coordinator John Brazil who discussed the need for cycling education, not only for cyclists, but also for motorists; and finally Caltrain Special Assistant to the CEO Mark Simon who talked about Caltrain's efforts to increase bike space on its trains.

A question and answer session followed the panel presentations, with questions coming from stakeholders in both the public transit and cycling industries.

KEYNOTE SPEAKER CARL GUARDINO

ROD DIRIDON

This is the second in a sequence of national transportation policy summits on bicycle safety; the first was a year ago. The summits have been specifically requested by the leaders of the congressional transportation committees. The transcript of these proceedings will be provided to those legislative leaders and will be the input device for a study on this subject, and bicycle transportation safety in general, that's being conducted by the Mineta Transportation Institute.

Figure 1 MTI's Executive Director Rod Diridon, Sr.

I'd like to proceed by introducing the keynote speaker for our morning session, Carl Guardino. Carl is the president and CEO of the Silicon Valley Leadership Group. All of the bios are in your packet, so we're not going to have long introductions, but I would like to stress that without question, Carl is the lead transportation advocate in our region, not only for general transportation but also for alternative modes of transportation. Carl, as the leader of the Silicon Valley Leadership Group—the organization that was founded by David Packard in the 1970s and continues to be stronger than ever—has been identified as one of the 10 most powerful people in the valley. He has led many transportation and transit elections and initiatives, both in Santa Clara Valley and statewide, and we really appreciate that guidance. He and his family live in Los Gatos.

CARL GUARDINO

It is such an honor to be here this morning.

I'm going to start with our mutual love of cycling. There are many reasons why people love to cycle. The first is health and exercise. Again, with a four-and-a-half-year-old daughter and an 18-day-old daughter, a big concern for my wife and me is sedentary children in our society. Four out of ten kids today in the United States are overweight or obese. We are raising a culture of children to be sitting and playing video games rather than playing outside, riding their bikes and getting exercise. Some are motivated to cycle from that concern.

The second motivation for some is related: diet and weight control. One out of every four adults in the United States is overweight or obese, and those numbers are growing almost annually. Cycling is a great way to maintain our weight and have a healthy diet.

The third is environment and climate change. In California, 41 percent of our greenhouse gases are from our daily transportation decisions. In the Bay Area, where we're supposed to be so environmentally friendly, it's higher—50 percent. This is an easy way to make that change.

The fourth is traffic and commute. Yes, we've all read recent reports from the Metropolitan Transportation Commission and others, as reported in the *San José Mercury News*, the *San Francisco Chronicle* and other publications, that traffic is down, primarily because of our economy. But in almost every year out of the past 30 years in the annual Bay Area poll, traffic congestion and commute is either the number-one or number-two concern. Cycling is a great way to bypass that traffic and have a stress-free commute.

For me, all those reasons are good, but mine was different. I fell in love with a triathlete nine years ago. I knew that any chance of dating then-Leslee Coleman, meant I had better get on a bike. She loaned me hers. It had to be cages rather than clip-ons. In those days, I would have killed myself with clip-ons. So I took my tennis shoes, put my feet in the cages, and tried to keep up with her for just 15 miles on Foothill Expressway. I failed miserably. But she was cute, I was persistent, and we've now been married for six years, have two children—and my love for her and my love for cycling still exist.

I think I was invited here because, like all of you, I try my best to pedal what I preach. I ride about 10,000 miles a year. A little over 5,000 of those miles are for my commute. I commute by bike four days a week, when I'm not on business travel, 16 miles each way each day, from Los Gatos to downtown San José. It is a fantastic way to start and end each workday. It also allows me to eat as much chocolate as I like.

I've been cycling for three years now. I started at three days a week for the first two years. This year I made a commitment to do four days a week, and I have actually been beating that average, doing almost four and a half days a week. It's incredible. As the CEO of the Leadership Group, it's amazing. Even after 16 miles of riding, no one in my office has ever said I smell bad. When you're the CEO you have that advantage.

As we talk about the first and last miles of a commute by bike, there's a role for each of us to play. While I understand much of today's focuswill be on the role of employers and transit providers, I'd also like to add local and state government, cyclists and advocates for cycling. So let me jump in first with employers. I think the work that the Silicon Valley

Bicycle Coalition recently did on the top concerns of people who commute to work by cycling, and what they would like, really resonates. Let me repeat them from my perspective.

I think the number-one concern is showers, or a place to clean up. That is key for many people. What I think is fascinating is that it doesn't always mean a shower. We have access to shower facilities in our building complex, and some of my colleagues who are cyclists take advantage of that. I just go into the men's room and clean up a little bit. Either way, knowing that you have a way to clean up is key.

The second thing is, of course, storage. I think we're all concerned about a safe place to keep our bike, whether it's a used bike that we got on Craigslist or eBay for $50 or $100 or a racing bike, no one likes that feeling of violation or the inconvenience of having their bicycle stolen. I wheel mine right in at the Leadership Group. Five out of 17 of our compensated staff ride at least one day a week. It's part of our culture. And people bring their bikes right in to their offices, their cubicles, in our hallways at the office.

The third concern is the support of the company. That's where a CEO's role comes into play in such an important way. We tried to emphasize this in a much more significant way a few years ago, tying in to the National Bike-to-Work Week and Bike-to-Work Day in the region. We kicked off what we call our CEO/Celebrity Cycle-to-Work Day Challenge. It's pretty simple. We reached out to CEOs and local elected officials to take part in a three-part pledge. One: ride to work themselves that day. Two: encourage their Bay Area, if not worldwide, employees to do the same. Three: personally host a celebration station at the worksite for those employees who participate, so that the employees can see firsthand that biking is an accepted and valued practice in the worksite. This year, here in the Bay Area we had nearly 60 CEOs and elected officials take that three-part pledge, representing more than 100,000 employees. It's pretty remarkable. First you have to get past the mental image of seeing your CEO in spandex. That is not always the best image. But when you get past that, the results of people coming together and celebrating that culture of a healthy lifestyle and commuting to work by bike are pretty amazing. When the CEO bikes, it has that cool factor, and is clearly an accepted practice within the workplace.

Those are three roles that we believe employers can play on an everyday basis. Let me mention some of the heroes, too. You've probably heard of Brocade, a company with $2.6 billion annual revenue and 48 straight quarters of growth, even through this bad economy, led by a phenomenal CEO named Mike Klayko. Well, he rides to work when he's not traveling two to three days a week, from Saratoga to San José, by San José's International Airport. He practices what he preaches. The employees appreciate it, see it and then replicate it.

In summary, the three key things that we like to see are: (1) space for bikes; (2) policies in place that encourage bicycle commuting; and (3) funding in place to make sure that those policies can be held up.

Years ago, we were working with Byron Sher when he was an Assembly member, on a bill called AB 434, which allowed the Bay Area Air Quality Management District to impose a $4 per vehicle license fee in the nine-county Bay Area and to use those funds for programs like bicycle commuting. For the past 10 or 12 years, VTA has taken advantage of those funds to have the racks in the front of buses and places on the

light-rail trains for bikes. Some of that funding was through that funding source. Those are the types of policies that transit providers can and have taken advantage of to make sure there's room for all types of commuters as we extend that first and last mile. I really take advantage of that, especially on rainy days. I can jump on light rail near my office, get off at the Winchester station in Campbell, and ride the rest of the way to and from my home. That is a great amenity, made incredibly easy by the Valley Transportation Authority, so kudos to them.

Figure 2 Keynote speaker Carl Guardino

Some of our other transit providers are having the additional burden of increased cyclist ridership versus types of travelers. There are difficult decisions to be made with very full trains on BART and on Caltrain how to accommodate everyone. I have ridden and used my bike on both systems. On some systems, BART I think is a notable example, you can't take your bike on all trains or at all times—that's really tough when you're trying to use it as a commute mode. On Caltrain, how do they deal with the dilemma of full trains wanting to be used by both cyclists and people on foot? It's something they're still struggling with. You are going to hear more this morning from Mark Simon on how Caltrain is trying to manage this. Our key as cyclists is to try to work in a constructive way with VTA, with Caltrain, with BART, with other transit providers, so that we all win, and that we deal with those last- and first-mile issues.

Local and state government is key, on the planning side, on the delivery side and on the funding side. We're going to talk more about that later.

How many of us in this room are active cyclists? Keep your hands up if at least one day a week you also cycle to work. I love this room. We're with each other here. So about half of us cycle to work at least one day a week.

I was thinking over the weekend, do I talk about the don'ts, or the dos? Let's talk about the dos. This was reinforced this morning on First and San Fernando as I was coming here. A cycling commuter was riding toward me with no helmet, riding with one hand. He went through a red light, right in front of a police officer, on the wrong side of the street, and then went on the sidewalk with all the pedestrians, right after that. How does that reflect on all of us, let alone the safety of that individual and everyone around him?

So, the dos: Do obey the law. Can you imagine if that were a car this morning? How would we feel about a car on the wrong side of the road, running a red light, and going on the sidewalk? Well then, why is it okay for a cyclist? It's not okay but it happens every day and I think we all see it every day. Second, please wear a helmet. This person was not. But I like my brains on the inside of my skull, rather than the outside. It's such a simple step to take. Third, stop and yield. How many of us every day see another cyclist roll right through a light or stop sign? We're taking our lives in our hands, but we're also taking the lives of others, and the reputations of every single other cyclist, in our hands. The next "do" is pay attention. Don't use your cell phone on your bike. It's illegal and it's unsafe. Don't wear your iPod earplugs while you're cycling. You can't hear emergency vehicles; you can't hear those cars around you. John Brazil will tell you if the data that more than half of the accidents between bikes and cars are the cyclists' fault is still current. More than half the time we are at fault! But here's the difference: in a crash between a car and a cyclist, the car is dented; the cyclist often dies. This is flesh, not metal, and it's not worth the risk.

We advocates have a responsibility. All of us in this room, to one degree or another, are advocates. And advocates are most successful when we pedal what we preach, obey the law and take advantage of doing what is right. Years ago, a member of this panel and I tried to form something in Silicon Valley called Courteous Mass, in direct response to something done further up the road that I am *critical* of, that I won't name by name, where cyclists show that we are part of the transportation system. But if we do this in a courteous way, we win more friends and allies on the roads, in the legislature and in city halls than we do if we act like the roads are only ours. So as advocates, let's make sure we live up to that.

I'd like to end this morning with what I would like to call Golden Helmet Awards to seven folks in our region and states who I believe are key advocates in the public, nonprofit and private sectors.

The first awardee is on this morning's panel. Corinne Winter took what was a very good but sleepy organization called the Silicon Valley Bicycle Coalition and rejuvenated it into a relevant, positive, proactive force that works on programs, policies, education and information that has really turned cycling around in our region. Corinne Winter, you are a recipient of our Golden Helmet Award.

The second is San José Mayor Chuck Reed. As cyclists or advocates, if you are not supporting his Green Vision for San José and Silicon Valley, please look into it. One of the actionable items in that Green Vision is 100 miles of bike trails and paths in San José. Can you imagine if we had 100 miles? My commute, as I told you, is 16 miles on

the way in, and because of the way I have to go back,17 miles. Ten of the 16 and 10 of the 17 miles are on trail, then six miles are on roads. What a difference it would make, if all 16 or 17 were on trail, not only from an enjoyment standpoint, but from a safety and pollution and stress standpoint as well. Look into the Green Vision. In absentia, the mayor deserves a Golden Helmet Award.

Third is Paul Krutko. He is the head of the Office of Economic Development in the city of San José. He helps put on the Tour of California stages that have come here, that get people excited about professional cycling, and then hopefully on a recreational and transportation level, too. He deserves the Golden Helmet for his co-promotion with us, for the past three years, of the Sierra Road King of the Mountain, to instill in people the belief that cycling is good as a healthy lifestyle as well as a commute mode.

The fourth is at the state level. Will Kempton is the director of Caltrans. If you didn't already know, he's not only an avid athlete, but also a huge cycling supporter. Deputy Directive 64, the Complete Streets program, is key to his work. Directive 64 decrees that every transportation and road improvement in California, to the best that it can, should accommodate cyclists and pedestrians. Every time we have a California Transportation Commission meeting, he prods me to publicly prod him on every project we review to make sure it's meeting DD 64. That's the type of advocate we need at Caltrans.

Next, from the private sector is Andy Ball, the CEO of Webcor. If you don't know Andy, you've probably seen the 400+ cyclists wearing the green Webcor jerseys riding around—they obey the traffic laws, by the way. I think Andy insists on it. What he has done to promote women's cycling, and cycling by all, in our region and state is phenomenal.

Sam Liccardo is next, the vice chair of the Valley Transportation Authority and a downtown San José City Council member. If you're not supporting Sam's work on better bicycle facilities in San José that he is trying to push through the legislative process in San José, please get on board. He needs your help; he wants to make it safer for all of us, and he, too, is a cyclist.

The final recipient of our Golden Helmet Awards is Michael Burns, general manager of the Valley Transportation Authority. He rides his bike in San Francisco to Caltrain, and then down to his office in downtown San José. He doesn't just do it once a year, on Bike-to-Work Day, which is good by itself; he does it whenever he can. He continues to promulgate practices at VTA to make sure that buses and light rail are friendly for cycling commuters.

With that, I want to thank you for putting up with my sleep-deprived state. A little flu and a bad back weren't going to keep me from this wonderful opportunity to talk about something that we mutually love. We can make great progress if we continue to work together. Thank you very much for your time.

PANEL DISCUSSION

ROD DIRIDON

We wanted to thank two unique bicycle manufacturers for joining us today: Bo Rodgers has the electrically powered bicycle in the foyer, and Bo is with Second River and ELV Motors; and Marcus Hayes from PI Mobility has the streamlined red bicycle with the different kind of form in the foyer for you to look at. Thank you for being here.

We'll proceed now into the element of the proceedings that are very, very important for the information we're going to be sending to Washington. Again, let me stress that we're looking toward the future. What's happened in the past isn't useful anymore. We're looking for ways to accommodate more bicyclists on mass transportation vehicles, while not inconveniencing current and future transit riders. It's quite a dilemma right now, with the reduced revenue for our various local transportation and community programs, it's our job to come up with solutions.

I'd like to introduce Gary Richards, "Mr. Roadshow" from the *Mercury News*. He has the most popular column in the *Mercury News*, in any paper in the region. He is a professor in the San José State University Mineta Transportation Institute's Master of Science and Transportation Management program, and he is a remarkable individual. Thank you very much for sharing your time with us, Mr. Roadshow.

GARY RICHARDS

Thank you very much, and thanks for asking me to be the moderator.

Santa Clara County is in the process right now of spending almost $30 million on bicycle-pedestrian improvements. Drive the Interstate 280 sometime at night, you'll see the Mary Avenue bicycle and pedestrian bridge over the 280—it's all lit up. There are two other bicycle bridges, one over 101 and one over 237, and I'm starting to hear from readers in two different groups that I didn't hear very much from before. One is the people who want to go out with their husband, wife, boyfriend, girlfriend, and bicycle on the weekend. They want to go out for recreation. They see this bridge and think, "I can go north-to-south now."

The other is the person who's driven to work forever, and he's now thinking, "Maybe I can commute to work by bicycle?" I'm hearing more and more, and I think the improvements are ringing a bell in heads that says, "Hey, this may be possible. When is this bicycle lane going to open up?" That is what the readers want to know.

We will also get into what Carl talked about, protocol on the road. If one bicyclist blows a red light, they think *all* bicyclists blow red lights. Well, that's not true, but it's not easy trying to combat that and teach car drivers how to make a right turn when there's a bicyclist in that bicycle lane. And that is the *one* issue that bicyclists complain about most often, with a lot of validity.

I'll introduce the panel in reverse order. Kevin will be the last person I introduce and he'll be the first panelist. Our panelists will talk for no more than 15 minutes. Then we will open up for questions.

To my right is Mark Simon. Mark was formerly a reporter with the *San Francisco Chronicle* and the *Palo Alto Times*. Now he works with the San Mateo Transit District and Caltrain, so he's gone over into a "real job" after leaving journalism.

John Brazil will be the next speaker. I call him the bicycle guru for the city of San José. When I have a question, he's the man I go to. He's been head of the bicycle-pedestrian program since 2001.

Corinne Winter is executive director of the Silicon Valley Bicycle Coalition. I liked what Carl had to say about how she took a sleepy organization and made it proactive. She was a big help when I was writing stories on the I-280/Mary Avenue bridge, and other bridges.

Dr. Shirley Johnson is the San Francisco Cycling Commuter of the Year. She went to Holland a number of years ago and became an avid bicyclist. If I read your bio right, you bicycled from Alaska down to San Francisco? Now that's a commute.

Alex Smith is with the Federal Transit Administration.

Sean Co is with the Metropolitan Transportation Commission.

And our first panelist is Dr. Kevin Krizek. Kevin is from the University of Colorado. If you have been to Boulder, you know how many bicycles are on the road up there, sometimes even in the snow. Kevin is very interested in where people live and how that affects their commute patterns.

KEVIN KRIZEK

Thank you so much, Gary. It's an absolute pleasure to be here this morning, sharing perspectives at the national level. I've now lived in Boulder for 16 months. I lived in Minneapolis for six years previous to that. My experience is primarily as an avid cyclist, as an avid cyclist commuter, but I am also very active in the research arena in the academy, trying to weave together various strands of thought to come up with a cohesive story—about how and where advocacy can learn from academia, how academia can learn from advocacy, and forge a partnership.

At the outset though, I'd like to send kudos to the Mineta Transportation Institute for initiating a study—a study that I am the principal investigator of—that analyzes bicycle access and egress issues to transit. It means a lot for the Mineta Transportation Institute to realize this is an important and under-studied issue and promote such an analysis.

Our gathering this morning is a reaction to a good thing. In many respects, we're a victim of our own success because transit companies—the operators—are now speaking out because their timetables are being violated by "too many damn bikes using transit," and bicyclists are getting frustrated because there's no more room available. Five years ago, this was a wonderful problem that we were striving for! Ten years ago, most metropolitan areas failed to have buses that had one, much less two, bike racks. Now it's standard practice for all buses in most metropolitan areas to have two bike racks, but that's not enough. We're stuck in that issue of how to take it to that next generation of integrating cycling and transit. This is a good problem that we are trying to address, and we all should be congratulated for that, including the cyclists and the transit operators.

Last month, the national organization for bike advocacy, Bikes Belong, gathered a dozen researchers in Boulder, Colorado, to try to figure out how bicycling-related research could better parlay into advocacy-related efforts and policy. This is the first time that a national advocacy organization gathered together 12 university researchers in one location for a day and a half to brainstorm about these related issues.

We're increasingly seeing bicycling in advertisements, in cartoons, in TV and in film. All you have to do is open up any magazine or watch television to see it. There are more bikes in the movies, more bikes in the backdrops and more bikes in art these days. Walk down the street here, and you'll see the bike culture exhibit currently on display at San José City Hall.

Many of us recognize David Byrne, formerly of the Talking Heads, as one of the country's most avant-garde musicians and artists. Well, we now have David Byrne penning his thoughts in the *New York Times* about bicycling-relating parking facilities and bicycling fashion. If anyone has picked up the *New York Times* over the past four or five months, you'll see that the Sunday Fashion articles are columns by David Byrne about how to look cool in Manhattan riding a bike. I think that we're at a turning point.

We like to hope that this excitement is more than flash-in-the-pan. As someone who has followed these trends for some time now, I think that it is. And while the cycling community needs to celebrate an increased investment and devotion to cycling, we need deliberate on measured approaches to maximize the return on investment for the limited resources that are available. We need to direct those resources efficiently and productively. And that's what the study—which is primarily why I'm here talking to you this morning—is aimed to do: look at that combination of bicycling and transit and realize that the way we've been doing it in the past may not be the best way to do it in the future, and examine what the most cost-effective ways to pursue this are.

Primary among the reasons that we gather here is integration of bicycling with transit services will have significant environmental, health and congestion benefits. A successful marriage between the two—bicycling and transit—will increase the catchment area, patronage and efficiency of transit, and increase the overall demand for cycling.

A core problem is that the predominant approach for integrating these modes—transporting bicycles aboard the transit vehicles—runs into capacity constraints. We're now pushing the envelope in many transit agencies. And a further limiting factor revolves around the limiting constraint of the transit vehicle along the trunk portion of the trip.

We could adjust the capacity of bikes in transit through incentives, one biker gets off so a bike can get on. We could exploit technology by asking cyclists "When are you getting on and off?", and trying to match that with some sort of queuing system. But the opportunity is ripe to consider broader solutions.

These broader solutions could be along the following lines. First, rely on the standard practice of transporting the owner's bicycle either inside or outside the vehicle. Second, the owner could park their bicycle at the transit access or egress location and then walk. This option would require increasing investment around transit facilities, for approximately a mile or two, with respect to striped lanes, parking, etcetera. Third—and this is terribly under-studied and unexploited—think more broadly about public bike-sharing systems, share a bicycle, which would be based at the transit access or egress point.

Anyone who has been following this for the past X number of months knows that there is more than a general uptake in public bike sharing systems. We have read about the systems in Paris and Lyon. The jury is still out on these. Largely in response to the wonderful bike-sharing success at the Democratic and Republican National Conventions this past year, which made bicycles available to delegates in Minneapolis and Denver, both of these cities and others are now on the cusp of considering public bike sharing systems.

None of the systems have really played out yet. Nor do we know the formula, the protocol or the pattern that we need to follow for these programs to be successful. But we do know there is more than considerable enthusiasm toward trying to figure out patterns of success with these types of systems. Delving into that knowledge and harvesting it, for bicycling and transit, is important. And the burgeoning work examining the characteristics of costs of bicycle-sharing systems will directly feed into this research as well.

The question here is: given the variety of urban-form settings—sometimes we have bike lanes, sometimes we don't; sometimes we have high-density, sometimes we don't; sometimes we have high density but without a population of bicycle commuters; sometimes we have low density with an active population of bicycle commuters—what are the costs of feasible alternatives that provide the most effective solution to this issue?

The Federal Highway Administration reports that over one-half of U.S. residents live less than two miles from the closest public transportation route. That suggests that there might be more than a compelling market out there for people to be riding their bikes to transit. Now, which part of this market should we maximize our investment in? What is the potential to seize this market?

We need to put our psychologist's hat on and really think about the various issues that cyclists have to overcome in order to make that trip. We have initial considerations: Do I need to pick the kid up from daycare? Do I feel groggy this morning? Is it raining outside? If any one of those are possibly a "yes," you know as well as I do that the likelihood of riding a bike is going to be less.

Then we have trip barriers: Is there a lot of traffic on the trip? Is there a pinch point, a particular bridge that we have to cross? There needs to be only one intersection to cross to be threatening for many of what we call Type B or Type C cyclists. Removing these different types of trip barriers, bicycling to transit being one of them, is an important thing.

Then, there are destination barriers, and these are exactly the types of things Carl was talking about. Ideally the destination, at the employer or other site, provides a supportive environment, through parking, increased morale or what not. Bicycling-transit really integrates, from a psychological perspective, the latter two stages: the trip barriers as well as the destination barriers. And only after each one of the three criteria is satisfied do we have a successful outcome—that is, a bicycle commuter.

It requires us to think diligently about this, which is one the reasons why, as part of this research, we are going to be conducting focus groups and case studies in a handful of different settings, to glean information from both avid cyclists and casual cyclists about the different types of issues that need to be overcome, and inform us about the possibilities.

In the end, this research is headed toward analyzing the cost-effectiveness, convenience infrastructure, and benefit considerations of integrate bicycling with transit services. We will be doing this in approximately one year's time, and we will share some of the results of this research with Peter Haas at the Mineta Transportation Institute. The users will be able to benefit from those seeking guidance on the most cost-effective strategies to maximize bicycling-transit integration, guidance that will likely reject a "one-size-fits-all" approach. Ultimately, we will be able to offer transit agencies informed suggestions on how to retain and improve returns on their investments by overcoming rack capacity limitations, and more effectively integrate bicycling and transit.

I have a lot more to say, but at this point, I want to thank you very much for the invitation to come to San José, and for your time and attention this morning. Thank you.

GARY RICHARDS

The next speaker will be Sean Co. Sean is with the Metropolitan Transportation Commission and will be able to offer a Bay Area-wide view. He also bicycles 18 miles a day, roundtrip. A few weeks ago, I asked various transportation planners in the Valley how they commute to work. I thought I'd get, I drive solo every single day. I did, admittedly, set the bar low because I asked, One day a week, do you use an alternative means of transport to get to work? Because that's what we always hear as commuters: If you can, do something else one day a week. But a *vast* majority of the responses exceeded that, so I was encouraged—it wasn't the story I expected. But the poster boy here is Sean.

SEAN CO

Thanks, Gary. One of the reasons we're here today is to talk about bicycles as a legitimate mode of transit. This isn't really a fringe activity, but it is seen as one. Bicycling is an efficient, convenient way to get to transit, but we lack some of the data to make that case. I'm going to talk a little bit about problems with the data.

One is that there is an undercount of cyclists in general from the sources of data we get our numbers from, the census data, as well as, in the Bay Area, the Bay Area Travel Survey, which basically asks people where they went and what type of trip they made. The reason for the undercount is because the question we are really asking people is, "How did you get to work last week?" About 1.5 percent of people ride to work. But in the Bay Area, work trips are only about a quarter of all bike trips in general, so we're disregarding this whole other host of trips that people make.

We talk about recreation trips versus commute trips, but we really don't make that distinction when we talk about car trips. In the Bay Area there are about 81,000 home-to-work bike trips per day, but the second-highest category is about 75,000 shopping trips, and trips to school.

The difficulty with bikes-to-transit is that it's difficult to quantify. Since the data we collect is self-reported, the trip can be counted as a transit *or* a bike trip. For example, this morning I took my bike in the rain, rode it to the BART station and got on board. When I leave work, I intend to ride my bike all the way home. Had I been answering the question from the census data, I could have said I got to work this morning either by bike, or by

transit—it's up to me, as the person making that trip. Someone who walked to transit might count that as a walk trip, or as a transit trip. The specifics are not tracked in the census data or in our travel data.

Transit operators in the Bay Area do try to keep track of this; they do special studies, they try to track mode of access to transit. They don't ask where people are coming from but they do ask, "How did you get there?" They use a different methodology but they don't gather data at regular intervals so it's hard to track how people are getting to transit and by what mode.

Also in the Bay Area, we have 27 transit operators, so it's hard to track every mode of transport. Are people driving and parking, are they taking a bike to transit?

There's quite a bit of evidence that bicycling is growing, as Kevin mentioned. You can see that in your day-to-day activities, even if you ride transit or drive a car. In general, there are more people riding bikes. For example, on this year's Bike to Work Day, which was just last month, it was up 36 percent over previous years. And in 2007, it was up from 2006. A lot of people are riding their bikes. In Gary's column, some people have said high gas prices have forced them to look at different ways to get to work. And there's been a growth of bicycles on transit. Of course, Caltrain has had some challenges accommodating all the bikes. And with other transit operators in the Bay Area, BART for example, you'll see a bike on board pretty much every trip you make.

Why is this important? In addition to keeping track of transit trips and bike trips, we're often asked, "What is the effect of providing infrastructure or better access on transit?" What does that get you? We do know that if you build it, they will come.

The city of Portland has tracked this pretty well over the last few years, and there is one particular chart that all bike advocates and transportation researchers overuse, but it's effective nonetheless. It tracks bikeways versus the number of bridge crossings on a particular bridge within the city. To give an example, in 1992 they had 83 miles of bikeways and about 2,800 crossings on the bridge. In 2005, they had 259 miles of bikeways and about 10,000 crossings, so there's definitely a case to be made that infrastructure affects bike trips. Whether that's cause-and-effect or routing, we don't really know, but at the end of the day, there *are* more people riding.

To that end, I have been working with bicycle advocacy groups, and UC Berkeley and Alta Consulting, on a national documentation project, a bicycle and pedestrian count project which will come up with a methodology that will allow regions all across the United States to really compare counts by collecting data in a specific way. That will either be by counting crossings at a specific point, or by counting the number of bikes or pedestrians in an intersection.

We did this back in 2002–2003. We identified 100 locations in each of the nine Bay Area counties and said, "We are going to count there every year." We didn't really know what we intended to do with the data. We've stopped doing that, but there's been a big interest in it this year and there's going to be a lot of people collecting data. At the end of 2009, I hope to have some numbers that we can look at, and then in future years perhaps we can hire a consultant to track this data, as we do for our other modes of transportation: transit and highways.

I now want to talk a little bit about the Complete Streets Policies, because it's really not just about planning for one mode, it's about planning for access. There are some new policies that have got agencies used to thinking about moving *people* instead of cars or just trains.

In 2006, MTC had a routine accommodations policy, which is a Complete Streets Policy, that was to consider bicycle and pedestrians in all project planning and design. The way that's done is via a checklist that project sponsors are required to complete. The checklist has about 10 questions that look at current projects and check if bikes and pedestrians are being considered, and if not, why? That policy, even though it has been in place, was just recently applied to the new American Recovery and Reinvestment Act, the stimulus projects for their local streets and roads. There were some limitations because of the way the money for the project came from the federal government, but we got all the project's sponsors to fill out the checklist. It was really helpful. It helped people see that bike projects and road projects are not mutually exclusive. If you have a Complete Streets Policy, it includes *everybody*; and you're talking about funding the roadway and not a specific mode of travel.

In 2008, the California Complete Streets Act also passed, stating that city and county general plans should accommodate all road users. It's a new shift in thinking for agencies around the state, and it is really getting them to think about more than just car travel. Caltrans also has a Complete Streets Policy, called Deputy Directive 64 that was revised along with the California Complete Streets Act. Caltrans strengthened it and changed a bunch of "shoulds" to "shalls" within the department. Caltrans have the ear of the road-building agency and they're trying to think of transit and bicycles and pedestrians as well.

I also want to add what we are doing as an agency. We are conducting a transit connectivity study. We have identified 24 different transit hubs as a way of finding real-time transit information and schedules. That's the information piece, because there's not just the infrastructure portion of it, but how people can find their way to transit. That also will address the last-mile issues, but we're still working on it right now so there's not that much to report.

In addition, for a few years now we've had a Safe Routes to Transit Program, which allocates $4 million every other year for the next five years, specifically for bike and pet projects that go to transit stations and hubs. The call for projects just went out just this week. It's designed to take some of the traffic off the bridges in the Bay Area, because it's funded by Regional Measure 2, to alleviate congestion. We've had Safe Routes to School for a while and the Safe Routes to Transit is a new way of thinking.

GARY RICHARDS

Our next panel member is Alex Smith, with the Federal Transit Administration DOT. We have a champion here: Alex is the only male to be honored as a National Collegiate Mountain Bike and Road Champion.

ALEX SMITH

One question I have for us in this room is "Can we make a difference?" There are a lot of empty buses driving around. What do we do when we see all these empty buses driving around, or empty bike lanes? Is this just a bunch of bureaucratic-speak, or does this actually translate into results?

In Los Angeles, the Rapid Bus program has seen about a 30 percent increase in ridership. If I were in charge, I'd look to something like that as a model for success. Curitiba, Brazil, inspired Los Angeles to make those changes. They didn't have a lot of money, and they asked, "How can we make a big difference and get the most bang for the buck?" I challenge transit agencies to think in that way: How can we get the most bang for the buck? Where's the low-hanging fruit, so to speak?

I have worked for the Federal Transit Administration (FTA) since 2002, and I think the easiest way to bump up ridership and get the most results for the least amount of money is by providing better bike access to transit. How can we do that? There are public/private partnerships for these bike stations, and Warm Planet in the Bay Area is a good example.

The problem is, by their nature, high-capacity transit lines, like Bus Rapid Transit, Light Rail Transit, Muni Metro and heavy rail like Caltrain and BART, are too expensive and too big to have a very wide network. So we have a few major lines. How can we get to those lines? The choices for accessing these thick lines are by neighborhood bus—I prefer the term *neighborhood* bus; *feeder* bus turns us all into feed, so that's not such a good solution—or walking.

While necessary for the mobility-impaired, neighborhood buses are often slow and expensive for agencies to operate, so I do recognize they perform a critical function but they are not necessarily the only or the best solution in all cases.

While environmentally favorable and inexpensive, walking is slow. In studies, people don't like to walk more than a quarter of a mile, so that's a problem. We can't get BART or Caltrain within a quarter of mile of everybody's house, even in areas of pretty high-density.

While fast, driving is impactful and expensive. It's especially so when you consider the cost of parking to the driver, and the cost of parking to agencies—it usually falls within the requirements of a transit operator to provide a parking garage. FTA funds parking garages, I don't think they *should*, but I don't think I should get on the record as saying that. They're also expensive. Parking garages provide a lot of traffic in and out, create hotspots for CO2 emissions.

Biking, however, is inexpensive, fast and environmentally favorable. Again, it's not for everybody, but for an increasing number it is a good solution. We're not looking for 50-percent mode split-out on the bike, but if we can get anywhere close to 10 percent we'd be pretty happy in most places. In some places, like UC Davis, we have 70-percent mode split, so it can get pretty high.

Why don't more people take their bike to transit? Generally, bike parking is often not secure, and sometimes, needed services are not provided. We've heard talk of showers and locker room facilities. Additionally, bike commuters are discouraged on transit because they cannot take their bike with them on board high-capacity services.

What solutions can we find to overcome the main obstacles: security and amenities? What is my silver bullet here? One option is the attendant-staffed bike parking. In these arrangements, members pay often monthly or annual dues for services that function like a coat check: I ride my bike to the station, pick up a ticket, and then drop off the ticket and exchange it for the bike at the end of the day. This has a lot of advantages: you have somebody watching over your bike all day, it's pretty safe and secure, the transit agencies get a tenant to rent a space while the riders get a service staff that work and can accommodate all kinds of bike configurations. Staff can provide extra services like bike repair, maps and visitor information. The disadvantage of these staffed facilities is that it can be quite expensive to pay for the operating cost of the attendant.

Another option would be unattended bike parking at a station like BART or Caltrain or even a future bus rapid transit facility. This is actually, within the trademark name of Bikestation, the highest-growth sector. In this scenario, members gain access to a room with a key, code or proximity key and stations typically have video security. They may have showers, restrooms, lockers and a bike workshop area. Other vending or retail services may also be offered. These have lower costs, and there is a trade-off with a little less security also for both the people and their bikes.

A third option is automated bike parking. I haven't actually seen this in America, but in Japan they have giant machines that you park a bike in and it flies up. This approach can handle huge numbers of bikes very quickly with a low staff support. The disadvantage of this approach is it's very expensive to start up and only makes sense when you have a huge number of bikes. We should be so lucky someday to be able to pay for such a machine, but at this point, it's not feasible.

A fourth option is to provide incentives for transit agencies to accommodate bikes on board transit vehicles. When you have a station, whether it's attended or not, that presupposes that you can ride to the station, get on the train and then walk at the other end. That's not always feasible. Sometimes you need to ride to the station, take the bike on, and then ride at the other end. So it depends on how far your origin is from the transit line and how far your destination is from the transit line. Even if you could walk at one end, you want to do a trip in the middle—"trip chaining," for example, you have to stop and get a haircut halfway down—so you want your bike on the transit system. Shirley Johnson will talk more about this, but it's an important part of this whole equation, because the stations will not accommodate a big chunk of peoples' trip-making purposes.

A fifth option is to provide commuters with the same incentives as transit commuters. Many of us who work for public and sometimes private industries get commuter benefits to take transit, whereas the tax break for bike commuters is recent. Similar to Don Shoup's Parking Cash Out Law, which made it possible to get cash in lieu of a parking subsidy, perhaps there's a way to get a bike cash-out where, if you're not taking the bus, you can get paid the same amount of money for riding your bike. It would be complicated because it's hard to verify if someone might expend the cash on bike commuting rather than just keeping the money and taking their car.

If we settled on one of these options, how could we secure the funding needed to bring it about? Currently, FTA provides 90 percent of the capital to local agencies and transit providers to install bicycle facilities, and up to 95 percent for bicycle-related transit

enhancement projects. Ninety to 95 percent is a higher rate than for other types of projects. But FTA (Federal Transit Administration) and FHWA (Federal Highway Administration) do not provide funds directly to anybody who might want to operate or implement these ideas. A transit agency or local municipality would have to do that.

One important attribute of the federal funding for bicycle and pedestrian facilities is flexibility. According to FHWA guidance, all the major funding programs can be used for bicycle and pedestrian-related projects. All too often, local agencies, with a knee-jerk response, go to the Transit Enhancements Program, but there are 15 or 16 different funding programs, and most of them make bicycle and pedestrian programs eligible. CMAC (Congestion Mitigation Air Quality) and STP (Surface Transportation Program) funding are often very appropriate. A quick list of the different programs that can be used for bicycle funding, including all federal sources, includes: the National Highway System Program, Service Transportation Program, Highway Safety Improvement Program, Safe Routes to School Program, Transportation Enhancements Activities, CMAC, Federal Lands Highway Program, Scenic Byways Bridge State and Community Safety Program, Job Access and Reverse Commute, and Recreational Trails. There are a few more, but you get the idea. There are a lot of different pots of money out there. I have more information, but to apply, you have to go through your agency and they probably have this information already. If they don't, see me!

There are some eligibility issues to keep an eye out for with bicycle and pedestrian projects. Transportation purpose has already come up: the purpose of a bicycle facility shall be transportation, not recreation. This is a little bit of a shaky distinction; it does not exist for pedestrians or automobiles, and I don't think it should exist for bicycles, but some people are afraid of funding swerving little routes in a grassy field somewhere.

Non-construction activities, generally, are not eligible for most programs, although there are some, including STP, TE and CMAC. Generally, federal funds are for construction, although there are some exceptions.

There are some federal funding requirements that are streamlined for bicycle projects. According to FHWA guidance, it makes no sense for activities such as crosswalk striping, bicycle parking installation and bike lane marking, which usually require no additional right-of-way and cause no environmental impact, to have the same approval process as a multi-lane highway construction project. And the construction of bicycle facilities is normally exempt from having to complete a project-specific NEPA (National Environmental Policy Act) review. I just threw that in because I know that's an issue now in San Francisco with the current Bicycle Master Plan.

In conclusion, there's a lot we can do now to increase ridership of high-capacity transit. I have pointed out what I believe to be the low-hanging fruit and best opportunities to access these systems: attended and unattended bike parking facilities. I have also outlined currently available funding mechanisms that are probably under-utilized and not fully understood.

GARY RICHARDS

Our next speaker is Shirley Johnson. Shirley moved to Holland in 1987 and fell in love with bicycling and the way of life over there, and is the founder of Bikes on Board, a great success and a great problem for Caltrain.

SHIRLEY JOHNSON

Thank you. First, I'd like to thank the organizers very much for inviting me; it's a pleasure to be here.

There is a handout that has a slide deck. Unfortunately we're not able to project here, but I would encourage you to look at the handout; it's called "Bike Plus Train: A Perfect Combination."

All the work I'm going to be presenting today is from the Bikes on Board project, which is sponsored by the SFBC (San Francisco Bicycle Coalition).

First, I'm going to talk about access to public transit and the benefits of bicycling. Then I want to move on to a case study of Caltrain's onboard bicycle service. I want to talk about how Bikes on Board has been working with Caltrain to improve that service, including investigating some of Caltrain's concerns about it. Then I want to go into Caltrain's progress before I close, and emphasize that bike-plus-train really *is* a perfect combination.

The Metropolitan Transportation Commission has done a study in the Bay Area and they found that people living within a half mile of a transit station are three times more likely to take transit. For a lot of people, it's the time to transit that's important. In 10 minutes, a person can walk about half a mile. But in 10 minutes, that same person can bike two miles. So what a bike does is increase the accessibility sixteen-fold to a transit station.

Access to public transit is really important. The average bike commuter can or *will* ride about three miles, there have been studies that show that. A lot of people don't live within three miles of work, but a lot of people do live within three miles of a transit station. So combining the bike plus train considerably extends the travel range and enables people to commute to work by bike, which is what I do every day. I bring my bike to the station. I, and many other cyclists then bring our bikes on board for a fast trip of many miles, and then we bike to our destination. Caltrain is a national leader in the Bikes on Board service. They're able to green the first *and* the last mile, by allowing us to bring a bike on board the train.

Caltrain's Bikes on Board service is enormously popular. It offers convenience and flexibility rivaling the automobile. In fact, 40 percent of cyclists vary their normal commute pattern. Caltrain did a study, the 2007 Online Bike Survey, and found that the number one reason cyclists bring their bikes on board is that flexibility. With my bike on board, I can get off at a number of different stations and arrive at the same destination. This is particularly helpful today because Caltrain service to some stations is once an hour, but by using adjacent stations, riders can take trains five times an hour. Suburban stations in particular have limited public access. With a bicycle, that's no problem; you can just jump off the train and ride to your destination. It's door-to-door, and it's often faster than the available public transportation when there is public transportation. So it's very useful to have our bikes on board.

And, of course, it's a green commute method: Sixty percent of cyclists who ride Caltrain cited environmental concerns as the reason they bring their bikes on board.

And, we all know, biking is fun and great exercise. We really love it and we love Caltrain's Bikes on Board service. In fact, more than seven percent of Caltrain's passengers bring a bike on board today.

What may have started years ago as perhaps a novelty has become a true, practical, viable commute method for those of who ride our bikes to work every day using Caltrain's onboard bike service. It's a fabulous system, and I think some people didn't expect it to have quite the success that it does today.

With that success comes some challenges. This is a photograph of cyclists who were denied boarding, something we call "bumped," because there wasn't enough space on the train for their bikes. These cyclists all have paid tickets because of Caltrain's proof of payment system, the conductor stands in the doorway, and does not let the cyclists board. The most frustrating part about this is watching that train pull away with empty seats. Caltrain's 2009 annual passenger count shows that every train ran the entire line with empty seats.

Cyclists are being bumped every day. This is correspondence from the Caltrain board meeting and it's full of emails from cyclists who are reporting being bumped. Cyclists are also exceeding capacity on the train. A graph in your handout shows weekday bike boardings on the Y-axis and year boardings on the X-axis. We see that bicycle boardings were increasing rapidly until 2006, when routine bumping began. We would have expected bicycle boardings to continue to increase, but, in fact, they flattened out. The chart underneath shows that from 2003 to 2006 walk-on passengers increased 16 percent and bicycle passengers increased 41 percent. From 2006 to 2008, walk-ons increased another 16 percent, so we would logically have expected that bicycle boardings would increase another 16 percent. Unfortunately, they increased only five percent because of the limited bike space on trains. The sad part about this is 2008 fare box revenue loss for Caltrain is about $1 million. The real tragedy is that Caltrain has a public hearing tomorrow to declare a fiscal emergency.

But there is a bright side: Caltrain has opened a new market: Eighty percent of cyclists rarely, if ever, ride Caltrain if they don't bring their bike on board. So this is a brand new market. These are people who normally would not ride the train. So there's a fantastic opportunity here. The question is how to resolve this issue.

This is the bike car in a train leaving San Francisco, so the train hasn't even left the first station, and this bike car is completely full. What that means is any cyclist down on the line doesn't have a chance of getting on until somebody gets off. This is that very same train before it leaves San Francisco, and what you see is it has many, many empty seats. The issue is a mismatched demand. There is not enough bike space, and there are too many empty seats. The obvious solution is to add bike capacity by removing these empty seats. Of course we'd all like to add more bike cars, but there are operational and budgetary constraints that prohibit that.

So we formed the Bikes on Board project. It is sponsored by the SFBC, and it consists of cyclists from all three counties that Caltrain serves. We set two goals: (1) increase bike capacity onboard Caltrain's existing trains by 2009, and (2) ensure recommendations for Caltrain's new rolling stock for electrification in 2015 meet bicyclist's needs. In scope for the Bikes on Board project are bikes on trains now and bikes on trains in the future. Out of scope is bike access to stations and bike security at stations. The reason these are out of scope for us is because Caltrain wrote an excellent bicycle access and parking plan, so they've got that covered; they've done that very well. But while we don't want to diminish the importance of that—it works for some people—only one percent of Caltrain

passengers actually park their bike at the station. The vast majority bring their bikes on the train; that's the real benefit of the service, and so that's what Bikes on Board focuses on.

Now, Caltrain does have some legitimate concerns about its onboard bicycle program: The first is dwell time, the concern that cyclists may take longer to board and cause delays. The second concern is seat removal; if you take out seats, there's a possibility you could lose ridership. The third concern is subsidies, because a bicycle does take the space of one seat on the train.

I direct you to slide 11 in your handout, a graph taken directly from Caltrain's 2007 progress report. It shows on-time performance on the Y-axis and the year on the X-axis. If you look between 2003 and 2007, you'll see that on-time performance was very good. It hovered around 95 percent, which is Caltrain's target. In that same time period, bicycle boardings increased 43 percent. So the data just does not support bicycles cause dwell time delays.

Caltrain has an operational policy that bicyclists must board last. When bicyclists board last, the perception could be if there is a delay, no matter who caused it, that the bicyclist caused it. So we recommend to Caltrain that they allow bicyclists priority boarding at the bike car, because then walk-on passengers can go to other cars, distribute boarding among cars, and that will reduce the dwell time.

The next concern Caltrain had was seat removal and the loss of potential ridership. Caltrain did an excellent, though inadvertent, experimental trial on seat removal. On May 30, Caltrain removed 14 cars from service for emergency repairs. The result is a lower seating capacity on the trains. Interestingly, ridership actually *increased* from five percent from May to June, even though those cars were out of service, and no walk-on passengers were bumped.

In your handout, on slide 13, there is a graph of that inadvertent experimental trial that shows average weekday riders on the Y-axis, and month in 2008 on the X-axis. What you'll see is the typical pattern for Caltrain: ridership increases through the summer months and then drops back down through the winter months. And we see that trend in ridership increase is uninterrupted between May and June, even though in June there were far fewer seats on the train. So the conclusion is pretty obvious: If you take out empty seats, it does not impact ridership.

Estimated subsidies are shown on the next slide, and the concern here of course is that all passengers are subsidized. In Caltrain's case, fare box revenue covers about 40 percent of operating costs. For all passengers being subsidized, if you look at this chart is shows that anyone who uses motorized transport is subsidized *more* than people who use either walking or biking. Not only that, walking and biking are green commute methods, greening the first and the last mile potentially, particularly with Caltrain Bikes on Board program, so, the program has social benefits as *well* as financial benefits.

We're thrilled and happy to report that Caltrain is making wonderful progress on improving its onboard bike capacity. They are in the process of adding eight bike spaces per bike car by the end of July 2009, a 28 percent increase. They are also converting two existing cars to bike cars by September 2009, and considering the possible conversion of a third. And one-third of the trains are specified to have 80 bike spaces, which is fabulous. Unfortunately, it's not guaranteed, but it is a step in the right direction.

Caltrain has said this is an interim solution, which is wonderful because it's not expected to meet demand, it is a step in the right direction. We do need more on board bike capacity.

After September 2009, two-thirds of the trains will vary unpredictably, with 24, 48 or 80 bikes per train. Now, when a train with 80 bike spaces pulls up, we'll *all* get on. When a train with 24 bike spaces pulls up, it'll be a bit of a gamble and we may get bumped.

Inconsistent service drives away paying customers, and that's something Caltrain really can't afford right now. So what we need is a consistent 80 bikes per train to meet demand.

Bikes on Board continues to help Caltrain plan for success—we need better consistency today—but just as important is planning for those specifications for the new rolling stock for electrification. We have a real opportunity here because we can plan for the onboard bike service, instead of trying to force fit it into an existing system. It's a very exciting opportunity and we're really looking forward to working with Caltrain on this solution.

In conclusion, bike-plus-train really is a perfect combination. It's green for the planet, wonderful for society, convenient for commuters, which is why we all love it, and it's cost effective for transit agencies. So, we recommend a sustained mode shift in the future; it makes good environmental sense and good business sense to shift from motorized transport to walking and biking. Thank you very much.

GARY RICHARDS

Our next panel member is Corinne Winter.

CORINNE WINTER

Thanks Gary. I definitely think transit and bicycles are natural transportation partners. It's not rocket science, you know? How we do it is certainly a matter of debate and I think a lot of things rest on the shift that is currently happening within public agencies. With political will, things are currently shifting so that bicycles are more of a part of the transportation process. There's a lot of evidence of that; what Sean was saying in terms of the Complete Streets Policy, the things we're seeing coming out of the city of San José, Caltrain working more to accommodate cyclists. So it is happening, but there are a lot of questions—how do we do it and whom is it going to work for?

One of the really big issues is the topic of latent demand, which a couple of the panelists touched on. There are a lot of people that might use bikes and transit if they felt it was more possible for them. Those include people that are just on bikes, just on transit or primarily using the auto for their trips right now. That is a big issue and there is a lot of data that needs to be collected to target that. How many people would be using these facilities if we did build them? Somebody had said, If we build them, they will come, and I think there's a lot of truth to that, but if we get data to that effect, then there will be more political will to build these facilities for cyclists, and partner with transit.

There are a few critical topics in bike commuting right now: one, as Shirley spoke on very well, was the onboard accommodation on transit, which I feel as well is a huge issue, and I'm very thankful that Bikes on Board has done so much to promote that. We've also

worked with Caltrain extensively on their capacity on the trains, and there are both short-term and long-term issues there; they're planning on converting their rolling stock at some point in the next few years—it's really uncertain now when that will happen—and we've been very pleased to see them accommodate cyclists by taking out seats and getting more bikes on board in the meantime. But in the long term, what we end up with in this area will serve transit users for the next several decades. It is critical, and so we look forward to hearing more dialogue and getting more public input on that.

Another issue is how do we simplify getting our bikes on board? It's a little chaotic on the platforms sometimes with bikes. Can we have real-time information distributed to cyclists on the capacity for the trains? Things like that matter a lot when you're dealing with a train that's trying to come into the station and pull out again as soon as possible. Then, how do we just deal with the boarding process? As Shirley mentioned, right now bicyclists are supposed to disembark after the non-cycling customers of Caltrain, so that can create other issues, and we can probably work out a system whereby the boarding process is modified in a positive way.

The second big issue is the wayside solutions. About eight or nine months ago, we called together a roundtable of about 40 different groups—businesses and agencies, cities, VTA, Caltrain—and we said, no matter how many bikes we get on the transit systems here in Silicon Valley, it's never going to be enough. We're always going to need other options for people. And there are some people who don't need to have their bike with them at all times, and those people could be served by a bike-sharing system. We need to make sure the system is consistent, all throughout the region, all throughout the Bay Area is the hope, so you can get your bike-share system pass and go pretty much anywhere and be assured of having a bike to take with you wherever you need to. To me, that sounds like heaven, so we're working with VTA on a pilot project right now to try to figure out what this might look like. There has been a lot of activity in San Francisco with the MTA (Municipal Transportation Agency) as well, so hopefully we'll be able to coordinate this on regional level.

We're also trying to draw businesses into this. Here in Silicon Valley in particular, there are a lot of businesses that are already creating bike-share systems. Google now has a way to store bikes at the Caltrain system, so their employees can ride a Google bike from the Caltrain platform to their headquarters. In a public bike-sharing system, we would essentially have that for everybody, with kiosks at all the major businesses, Caltrain stations, downtown central areas and wherever you might want to go. This is complicated—as some of you who have visited European countries and other cities in the United States know—it soon becomes clear when you start a system like this that you have to do what's called rebalancing; you have to move all the bikes around every night because people aren't necessarily consistent in their patterns of use. This is an operational issue, which is why we're getting everybody involved, talking about it right from the get-go and hoping that we'll be able to create a uniform system across the Bay Area at some point.

Another wayside solution, of course, is storage improvements; again, not rocket science. I think a lot of the agencies are working on that, but it would be great if we eventually have a uniform storage system. Part of the reason cyclists don't use open lockers and storage systems more—it's too complicated. I've never used them, I've never taken advantage of them; I have to figure out too much about my schedule, I have to call this

transit agency to get a locker set up here, and call that one to get a locker set up there. If we could somehow, maybe with guidance from MTC or other regional bodies, create some sort of a uniform system, it would be a lot easier for people to use.

Another priority is the infrastructure design around transit stations and in transit corridors. This is something both SFBC and SVBC [Silicon Valley Bike Coalition] work on quite a bit—the concept of green mobility and how we make it so that people can live, work and walk in these neighborhoods, and bike and have safe, pleasant access to transit. Right now we're focused on the Diridon Station area project. I don't know how many of you are aware of this yet, but the City of San José applied for a grant and got almost $1 million to do the planning in a half-mile radius around Diridon Station. Stadium or no stadium, that's going to be a big project. We're working with Greenbelt Alliance and some other organizations to ensure that bicyclists and pedestrians are accommodated in the plans, and that the streets are designed in a way that is really conducive to people using the streets right around the station, and getting between the station and downtown or their home with a bike or by foot. There is, as most people in this room know, an incredible amount you can do there. There will be public meetings on this; if you are interested, keep an eye out.

We're also shifting gears a little bit and doing a lot of work with businesses. As I mentioned before, people want to be able to ride from the train to their business, but they also need to be able to ride from their home to their businesses, and there are a lot of things that the businesses can do to encourage people to bike in. As Carl mentioned earlier, our three big ticket items are: (1) Give people a transition space—it doesn't need to be a shower, but biking and working are two different activities and you need to give people a space to make that transition; (2) Provide places to store bikes securely, generally at people's desks or in a locker room, not outside in the rain or somewhere in the back parking lot; it's got to be better than that; and (3) company messaging. If the executives at the company say this is something we promote, employees will really follow that.

I also want to give the City of San José some credit: John Brazil has been doing a huge amount there. I didn't realize until they applied for certification just how much they have been doing. We gave them our highest rating, the Platinum Rating, and they were the only company or workplace in the initial round that got that rating—things that go above and beyond showers. They have bikes available for employees to use during the day. They also have a really robust program whereby they encourage cycling events, like the City of San José Cycling Classic.

A lot of people tell me, "I would ride to work, but I just don't feel safe." So another thing we did to remove barriers to cyclists is launch our Share the Road initiative. We are not going to solve the problem overnight, obviously, but we're going around talking to groups, both cycling groups and motorist groups, giving a presentation and trying to promote education for cyclists on proper lane position and proper traffic behavior, and trying to generate more awareness with motorists as well. We're also revamping our incident report. We've had this for a long time on our web site. Anytime cyclists are victims of aggressive behavior, they can give us that data. We're going to keep that data and see if there are patterns, specific locations with problems that we need to address, *or* specific motorists; if we get license plate numbers repeatedly that's something we can go to the local jurisdiction with and say, what should we do about this?

So we are working on a lot of things right now. In general, I think it's mostly about a constructive dialogue—that's been a focus of the SVBC—to work with agencies, to work with the public, to figure out how can we create a better situation for cyclists and make it easier for people to bike commute.

GARY RICHARDS

Our next panel member is John Brazil, head of the Bicycle Pedestrian Program in San José. One of the things that John has been key in getting implemented is safety classes, in which they give away free helmets to the first 25 or so bicyclists who sign up, as a way of telling them that there is a way that you can commute to work safely.

JOHN BRAZIL

Thank you, Gary. I'm going to talk about a few things, but there were so many interesting points that were raised with the other panelists that I may meander a bit, so I hope you'll indulge and work with me if I meander a bit from regular talking points and just throw out ideas.

What I want to talk about first, briefly, is the big picture: why should we even care about any of this? Second I want to talk about bicycling, generally. Third, what is San José doing? Then, fourth, bicycling in the last mile in transit. So, let's dive in and see what kind of chaos ensues.

The big issues: Some of the previous panelists mentioned these, but why should we really care? We're busy, day in and day out, what does it really matter? I would argue that there are at least three reasons that come to mind. Yes, we've heard them all before, but they're real. Climate change, whether we want to accept it or not, is a reality. It may not affect us, but our kids or our grandkids are surely going to be affected, so we ought to be responsible and do something about it. As one of the previous panelists mentioned, in the Bay Area, 50 percent of our carbon emissions come from transportation. Part of the solution to that problem is going to be bikes.

The second really big issue is one of public health. That sounds vague, but let's make it personal—you may know somebody who has diabetes, and certain types of diabetes are caused by a sedentary lifestyle, among other things, and diet. The more we can move and exercise, the more we can solve these public health issues. Bicycling doesn't solve the whole problem, but this is a real crisis in the public health system, and getting people to move a little more can help. This is "big-picture bicycling."

If anyone listened to the governor's address to the Legislature last night, they know that the state and local government budget issues are worsening. That may impact me more directly because I work for a government agency, but it's going to impact you as well because cities and states don't have enough money to do what they want to do: to pave the roads, to provide public services. How does that relate to bicycling? A large portion of our budget goes to simply maintaining the pavement on streets. I'm over-simplifying—this is one of many issues—but what do you think is going to cause a street to wear out more, a 4,000-pound car or a 25-pound bike? It's not that simple, and I'm not proposing we get rid of all the cars, but someone threw out a 10-percent goal, if we have 10 percent of trips by bike instead of the current average of two percent in San

José, that will have long-term have positive impacts, and maybe we can reduce those millions that we need for pavement maintenance a little, save some money and pay for other services that you want.

I'll throw out all the bragging rights, because I have to do that and I like to do that. As Corinne Winter, executive director of the Silicon Valley Bicycle Coalition mentioned, the City of San José is one of the first four workplaces in Silicon Valley, and also in the Peninsula, to receive Bicycle Friendly Workplace designation. We were the only employer to receive it at the platinum level. That means that we're making bicycling easier for employees. We have fleet bikes for employees to use; if they want to make a business trip close by that's work related, they can check out an employee fleet bike. It's also acceptable to take it out for a lunch break for health and wellness. That's part of the philosophy behind it: health and wellness for employees. We have, of course, showers for employees who ride to work, and we have secure bike parking and transit benefits so our employees can get free transit passes through VTA and subsidized transit passes through other agencies. We got our Bike Friendly Workplace reward.

We've been re-authorized as one of only 100 cities in the country to be designated a Bicycle Friendly Community by the League of American Bicyclists; that's fantastic, we're proud of that. *Bicycling* magazine, the leading bike magazine in the United States, designated San José one of the top three Most Improved Bicycling Cities this past year, so we're making progress, but we have further to go. We have one of only 22 national recreational trail designations in the country and I think we're the only one in California to get that designation for a great and developing trail system. We have hosted international bike races: the Amgen Tour of California for four consecutive years. We're the only community in Northern California with a velodrome, which is one of those tracks where you can race a bicycle. And we were the first city to host the North American Handmade Bike Show, and one of only four cities to host the Livestrong Challenge, the Lance Armstrong Foundation's event where you raise funds toward cancer research by getting contributions to bike or run.

What is San José like for bicycling? For those people listening that aren't from this community, we're a city of approximately 1,007,000, the 10th largest city in the United States. We have a relatively mild climate and a flat topography that are perfect for bicycling. But, as I mentioned, we're only slightly above average, nationally, with about two percent of trips taken by bike, so clearly we need to do something more. What is that something more?

Before I talk about what we're doing, I want to talk about target audiences. A lot of times bike and transportation planners, but particularly bike planners, preach to the choir. We preach to that two percent that are riding a bike right now. And that's great, but I don't want to just preach to two or three percent. I want to reach the "latent bicyclist," the person who's saying "I might bike, but it's just, I don't know, I don't feel right" —the person who's not even *thinking* about bicycling. I want San José to be like some countries in Europe where 40 percent of trips are by bike. Not two percent, *40 percent*. We're not going to get there immediately, but to get even close to that goal, we have to preach to more than just the choir, to more than just the person who's already riding, feels comfortable riding in traffic, is putting on the lycra and racing on weekends. Those things turn off the latent bicyclist.

How do we reach that additional audience, the average person? What's their concern, why aren't they bicycling now? The things I hear repeatedly are: (1) I don't feel safe riding in traffic and (2) it's just not convenient; and this is going to tie into the transit link when I get to that point.

Safety: Well, we've done detailed collision analysis in San José for years. We know factually what the risks are and we know what we need to do to make things safer. To oversimplify, one of them—it's very challenging—is slowing cars down. But there are a lot of things we can do, and are doing, to improve our bikeways. The perception of safety is just as important as the factual matter of what we need to do to make the road safer. I can sit here as a transportation planner and ask, "Why aren't you riding?" "I don't feel safe on that road." I'll say, "Well, factually, it's safe." They'll say, "I don't care about factually, I don't *feel* safe." Reach that audience and get more people to bike and use transit trip links.

What we're doing in San José is updating our bike plan. Currently, we have our old bike plan, which is eight years old and calls for building about 300 miles of bikeways, including about 100 miles of trails and 200 miles of on-street bikeways. To date, we've built about 230 miles total: 50 miles of trails, 160 miles of bike lanes on the streets and 20 miles of bike routes. So it's good progress, but, when we updated our bike plan, which we're doing now, we realized we need other things.

First, we need a bigger network of bikeways, 450 total miles of bikeways will be our goal, because while we can ride on any street legally as a bicyclist, we may not feel comfortable on any street.

Second, we realize that most people don't like riding on streets. What we need to do is form a backbone of bikeways that are off-street, that people feel more comfortable on, and that's our great trail network that Eve Zuti manages. We have completed about 50 of 100 miles. Just like you'd get on the freeway to get to your destination, you could get on a trail and get to your destination. The trick is, we need the on-street bikeways, too, because probably 99 percent of destinations are off the trail system. Trails are great; we all want to be there, we're going to make them a great environment, but we need to have the on-street connections to get to transit stations or to wherever our destination is.

Third, we realize traditional bike facilities on streets aren't enough. Half the people in the room said that they bike, so you probably feel comfortable on a bike lane on a street with a stripe, a sign and a little space, but the other 98 percent of people often don't and that's why they don't ride. So what we're doing in San José is saying we want to enhance some of the bike lanes on streets, the primary ones that go to key destinations like transit centers. We're looking at a variety of options to enhance basic bike lanes. It could be providing some physical separation for traffic, it could be coloring the bike lane, it could providing buffered space.

San José has been doing other things, too. People talk about how you may need to shower at your destination, so for at least eight years our municipal code has required new developments to have showers and bike parking. And we are going to continue doing that.

These are key issues. As a lot of folks have mentioned, transit is key here. I take my bike to work everyday, and often I link with transit. That's wonderful and Caltrain is fantastic; it's been a national leader in accommodating bikes, but success creates new challenges

and so that's part of the discussion here. The panelists have named a variety of solutions that I support. We're going to need a pallet of solutions to make sure that people can get to the station and then can have a safe option for their bike, whether it's taking it onboard or parking it, or renting a public bike through the bike fleet. In the short term, I applaud the SFBC for seeking more access onboard and I also believe that in the long term, even if we could fill the trains completely with bikes, that's not enough; we need to have additional options. We can learn some lessons from other communities, particularly in Europe and Asia, that have larger bike shares and transit use shares. At some transit stations you see not hundreds but thousands of parked bikes. It's simply not possible for us to get thousands of bikes on the trains. So onboard is part of the solution, but we need to have other options. Bike shares, unstaffed bike stations, staffed bike stations, whatever they might be.

I also want to applaud Councilmember Sam Liccardo and Mayor Chuck Reed for pushing some of the issues about making bicycling more convenient in San José. Councilmember Liccardo was one of the prime movers in realizing that the average person doesn't feel comfortable riding on the street, and that's why they're not riding. I also wanted to mention our local congestion management agency and transit operator, which is VTA [Valley Transportation Authority]. They operate the buses and light rail that all allow bikes. They also do the planning. Just yesterday we met with VTA, and they are developing a pilot project for a public bike share at three transit stations in our county. So planning is in works. We'll need to identify funding once the plans are done, but eventually we'll see a public bike share pilot at the train stations here in San José, and probably in Mountain View and Palo Alto. That's fantastic.

I also wanted to share a notion of the most vulnerable transportation user, who is not a person in a car, because they have 4,000 pounds of metal around them. I drive a car once in a while, and there's nothing wrong with driving a car, but the most vulnerable user is a pedestrian or a bicyclist. There's a growing notion that transportation planners ought to put as a top priority the most vulnerable users, instead of having the top priority being single occupant vehicles.

Another idea I wanted to mention is this: Think about other communities where bicycling is mainstream. In European countries, the bike mode share may be 40 percent and then you add walking, maybe 20 or 30 percent transit and an incredibly low single occupant vehicle mode. That's a great goal to reach. In the States, where people don't bike, we talk about bike culture; there's this group, this bike *culture*. But if you go to a country with 40 percent bike mode share, there isn't a bike culture, biking just *is*. It's so much a part of people's lives that they don't think about it. Bike culture is great—you can fit whatever subculture you want: the body piercing, the tattoos, the tri guy, whatever you want. But wouldn't it be great if we got to a place where bikes were so much a part of our culture that we didn't think about it anymore? That's something we should really embrace.

GARY RICHARDS

Anchoring us today is Mark Simon.

MARK SIMON

I want to tout a June 20, 2009 forum in Redwood City, called the Grand Boulevard Initiative Forum. It is relevant to this particular group, and I'll explain why Caltrain is involved in it in a second. The Grand Boulevard Initiative Forum is an attempt to transform El Camino Real, from San José to Daly City, into a world-class boulevard that is pedestrian- and bicycle-friendly, and basically embraces and exhibits all of the concepts that we talk about: transit-oriented development, and walk-able, bike-able communities where people can live, served by transit, with clusters of businesses rather than the historic string of businesses that seem to be going out of business every five years.

SamTrans (San Mateo County Transit District), VTA and the San Francisco MTA (Municipal Transportation Agency) are sponsors of, and partners, with Caltrain. What does that mean? It means that Caltrain is funded by subsidies provided by those three agencies, state and federal funds, and what we get from our fare boxes. Shirley made reference to the meeting Caltrain is having tomorrow, the public hearing to declare a fiscal emergency. We have managed to get our annual deficit down from $10 million to about $2.7 million this year, and we're going to have to make some service cuts and increase parking fees, which of course makes bicyclists happy, and increase the cost we charge for the GO Pass to balance the budget. But we have a structural deficit somewhere in the neighborhood of $25 to $30 million, and this structural deficit isn't helped by the fact that the three agencies that fund Caltrain all have structural deficits of their own. This year, the state Legislature zeroed out the State Transit Assistance Fund, which is a major source of revenue for all three agencies. It has been cancelled for the next four years, it's what we call the state government diet: if you can survive after four years, then that proves you didn't really need it.

I'm glad to hear Caltrain described as the national leader in onboard bicycles. It's one of those things; be careful what you wish for. It isn't something we set out to do. In 1992, which is when Caltrain was formed as a joint power agency, we started allowing four bikes on a few trains. By mid-1995 we became bike accessible with 12 bikes per train on all trains. In 1996, we doubled that to 24 bikes per train. From 2000 to 2001 we increased our gallery cars from 24 to 32. Our Gallery train cars are the big shiny ones, the Bombardier cars are the red and gray ones. From 2004 to 2008, we increased our service levels from 76 trains a day to 98 trains a day, and that, by definition, increased our bike service. Our onboard capacity at this time was 32 spaces per Gallery and 16 for the Bombardiers.

We are now in the middle of a program, we are increasing the space on the Gallery cars from 32 to 40. In an unfortunate, misplaced burst of enthusiasm, I emailed my mailing list of more than 400 bicyclists who use Caltrain and told them we had finished converting all of the Gallery cars to additional bike space. We actually still have three left to do, but they should be done if not by the end of this week, by the end of next week. Of course, that piece of information comes from the same people who told me the conversions were already done, so be careful what you do with that information.

Increasing the bike slots on those cars from 32 to 40, we are also increasing the Bombardier cars from 16 to 24. We actually proposed more, but several people in the bicycle community, in one of those examples where it's useful to have input, expressed

concern that if we took all the seats out then they'd have to stand with their bike to make sure no one stole it. We talked at the very beginning of this show about the disappointment we've had when we've walked out—I've had the same experience—and looked where our bike is supposed to be, and started thinking, "Well, did I leave it there? Maybe I left it somewhere else?" You don't want to believe that someone took your bike, but someone did. So we understand that.

We're also committed to putting two bike cars on as many of the peak commute trains as possible. We mentioned we are in the process of converting two other additional Bombardier cars to bike cars, and we're probably going to convert one more. If we do that, then all five of the train sets that we have for Bombardiers will be two-bike-car sets. In addition to what we expect to be able to do with the Gallery cars, we think that will help resolve some of the consistency issues. We recognize that consistency is a critical issue. That's one of the things that affect all of our customers. Everything we do, we have to do in the context of our whole system, impact on the rest of our service—on our on-time performance, our reliability and on everybody else who also rides the trains.

It has been an interesting for us to learn how to work with the biking community. As I said, it wasn't something we set out to do, to become such a prominent participant as a carrier of bicycles. In the last year and a half, we have learned that we have to regard this as, essentially, a central part of our service. It's not the only part of our service, certainly, but it is something that we are in business. There was always an undercurrent of it's something we're doing, we may keep doing it, but we may not. We're going to keep doing it, and keep working with the bicycling community to see how we can make it better. That includes real-time information. Right now Caltrain doesn't provide any real-time information, not just for cyclists, but for anybody, because we don't have the infrastructure to do so.

The other thing that I want to dwell on a little bit is not dwell time, because we can debate all we want to about that, but the fact that we do worry about whether or not we're on time and dwell time is one of the things that prevents us from being on time. Do you know what dwell time is? It's how long the train has to stay at the station before it gets going again. We did do a Bicycle Access and Parking Plan that became the first full engagement of the cycling community because someone made the mistake of referring to it, when they first planned it, as the Bicycle Master Plan. Then, of course, the bicycling community wanted to know why the Bicycle Master Plan wasn't addressing bikes on board. Well, because the plan really wasn't supposed to be that. We got grant funding to do the plan and study wayside facilities, which is how we allow people to access the train station and what's available for them once they get there. So we mislabeled the plan, which created significant confusion. It was our own fault, and the debate ensued from there.

The main thing is that we do think that wayside facilities are a major way of meeting the demand for bicycles for that last mile. In this, we realize the main recommendations of the plan include cyclist-specific customer service and marketing—a unique segment of our customer base and we need to recognize and treat them accordingly. We have to increase the overall bicycle parking supply. First and foremost, we have to find a way to make the bike parking we provide safer. We have some bike lockers that people have moved into, not with their bikes but with all their worldly possessions and that's not really

what they're for. So we need to be more understanding of what will make using bike lockers more appealing to people, because it will ease some of the demand onboard.

We want to work with cities to improve station bike access, I reference the Grand Boulevard Initiative; that's a good example of really high-level thinking about how to transform the entire nature of a major boulevard, and get the individual cities to start thinking more thoughtfully about how these things all interrelate. We want to study innovative station site concepts, such as real-time bicycle capacity information, bike sharing, and subsidies for folding bikes. And we have a Legislative request in to one of the legislators of San Mateo County for a pilot program to subsidize a bike-sharing program and folding bikes, because there's more room on the train for folding bikes then there is for ones that can't be folded.

Where does all this lead? When we're done with the current expansion project, we have to assess its impact on our system. We're going to end up spending about $350,000 that we don't really have to do this. I don't say we don't really have it because I want to sound begrudging, but these are tough times for all public agencies and for transit in particular, which doesn't have an organized advocacy group in Sacramento. I was going to say in Washington, but the great irony is Sacramento keeps cutting, while money for transportation is *gushing* out of Washington in the form of high-speed rail money and stuff like that. So we certainly need help advocating for transit in general, and as we can grow transit, we can certainly grow bicycle capacity.

We have to assess the impact of and see if it's meeting the demand. If there's more demand, what can and should we do, and where are we going to get the money to do it? We are going to form a bicycle advisory committee; we have been meeting internally to discuss it. But it's something we've been very slow to get to, partly because we're all preoccupied with our budget issues. SamTrans is facing layoffs. I've been out of the business for five years and this is one of the first times I've had to sit through one of these meetings where you go from discussing, we're going to have to lay off 10 people to, here are the 10 people we're going to lay off. It's a whole different discussion when you suddenly realize these are people you know and have lunch with.

We are going to continue to pursue the initiatives described in the Bike Access and Parking plan; that information is on our web site, *caltrain.com*.

The next *meaningful* leap forward, really, in terms of our ability to expand capacity, is going to be when we expand the whole capacity of the rail system. We have plans to electrify Caltrain, in theory, by 2015, and to change to a whole new technology of rolling stock called Electric Multiple Units. This will mean the train is no longer a heavy locomotive that drags along a bunch of cars. Each car will have its own power, which means it's much more flexible and much more efficient. For example, one of our most popular trains is the express train that goes from San José to San Francisco in under an hour; it makes four stops. Under this new system, which we expect will be fully realized by 2025, we're going to make that run from San José to San Francisco in about an hour, but with 14 stops. There'll be so much more service. The problem now is not just that people get bumped—that's a problem that we're trying to fix in the interim.

Caltrain has formed a partnership with high-speed rail. We're still ironing out the details; there are a number of things that high-speed rail needs to do that we need to do. There is an economy of scale, and efficiencies, to be gained, and there's an opportunity for us

to make some of these changes for Caltrain using high-speed rail money, because the changes will serve high-speed rail's interests as well.

Again, Corinne asked me where we stood on replacing rolling stock, and the answer is that we have to wait and see what sort of relationship we iron out with high-speed rail. There are a number of people, especially in the central part of the peninsula, Palo Alto, Menlo Park, Atherton, who are increasingly alarmed by high-speed rail. If you support high-speed rail, you need to make sure people hear that point of view as well. I understand the concerns—people are worried about the damage it might do to their community, but we think of this as a fantastic opportunity to serve a greater number of people in a hugely more efficient, effective and modern way, and that would certainly include the bicycling community.

So what have we learned? We probably should have been more communicative and more transparent from the beginning. We are adding extra service, extra capacity. Some of the bicyclists love to be collaborative, some of them have a history of being adversarial and that's okay—that's what they're used to, that's who they are, that's how they get things done, and I say that without pejorative intent. We are continuing to concern ourselves with the system impact of all of these changes, but we recognize that the bicycle service is here to stay and it's a customer segment that we have to pay serious attention to. Thank you.

QUESTIONS AND ANSWERS

GARY RICHARDS

We're going to resume here with the question and answer session.

JEFFREY OLDHAM

I ride Caltrain and I've been working with Bikes on Board. We've been talking about the first and last mile and how bicycles are involved with that, but I want to talk about the middle mile. The middle mile is that segment in your journey that doesn't have adequate public transportation service. Why does this happen? Well, transit stations are not necessarily next to each other. Famously, London and Paris have this problem. We have this problem with BART and Amtrak in Fremont and Oakland, and we have this problem in San Francisco. We have non-uniform scheduling. Biking between transit stations saves me time because I can cycle faster than I can transfer. It also saves money, because I don't have to pay an additional fare. I can't usually just cycle faster to catch service, so how do the proposals of parking, bike sharing, bringing my bicycle on board, etcetera, address the uncoordinated schedule and middle-mile problem?

JOHN BRAZIL

The middle mile is the responsibility of local agencies and cities. The transit operators, particularly fixed rail transit, have stations, and they cannot provide stops every hundred yards. It comes down to cities creating a continuous network of bikeways and prioritizing the development of streets and ways that encourage, rather than discourage, bicycling. That's a whole other subject, but it's the city's job, to do that.

KEVIN KRIZEK

You've put your finger on a very important issue, and that is trying to articulate where bicycling and transit is superior to bicycling versus transit. If you take a look at land use patterns and the average bicycle trip, which is around five miles or so, you can get to more things quicker riding a bike, as you articulated, than you can on transit. Bicycling, for those of us who do it, provides greater accessibility and mobility than transit.

I live in Boulder, but I frequently teach and work in Denver. I've never had more than a five-minute commute in my whole life, but I now have an hour commute. I'm willing to bike 40 or 50 miles one way, but it's time-cost prohibitive. So, I can't bike to work anymore. I ride my bike to the bus station and take the bus to work. There's a certain distance, I would say 10, 15, 12 miles, transit usurps bicycling, and that's the market we're really talking about. But your point regarding trips of less than 10 miles is well taken.

MARK SIMON

One of the things we're increasingly looking at is partnerships and how we can expand the network. For example, In San Mateo County between Sam Trans and Caltrain, we do a pretty good job of going north to south, but most people live east to west, so how do you provide service to people in that direction? That's the next big challenge and it really is, as Kevin alluded to, not just a transit challenge; it's a planning challenge. How do you get cities to begin thinking about this, first of all, as their responsibility, whether it's something they have to take on directly themselves or identify partners to work with? Then, how begin to plan their communities so that they provide services for people to get to and from the main trunk lines? Getting to and from places that aren't served conveniently by the main system is something that needs a holistic approach; a response from a whole range of communities.

JOHN BRAZIL

I'd like to mention one approach that is part of the solution, and one of the policies that the city of San José has. For those of you familiar with transportation planning, when a new development is built, a traditional traffic impact analysis is done that says, for example, that if someone is going to build a high-rise office building, it will create X-amount of car trips, and the developer has to mitigate that, usually by making the road bigger. San José has said there are certain parts of town where we don't want to encourage more car traffic, so rather than that traditional business of saying, okay developer, you need to make the road bigger for cars, we say, developer, you need to mitigate the transportation impacts by funding improvements for pedestrians, bikes and transportation. So, when a development happens in the middle mile, in these locations in San José, rather than just building a bigger road we make the improvements for pedestrians and bicyclists to get to transit. It's part of the solution.

TIAN HARDER

My name is Tian Harder, and I'm from Mountain View. I am a green activist. I just want to start by saying that transit is really a lot better than it used to be and I'm very grateful for that. But I live in fear of being bumped off Caltrain, or not getting on it, and I have a couple of suggestions: One is, could you give the conductor a pass to give people who have been bumped so they are first in line for the next train, then less likely to be bumped again? Also, lately I'e seen more people bringing Razor scooters, because they're small and you don't need much space for them. Maybe more scooters could take the pressure off the bike cars?

MIKE CABRILLO

My name is Mike Cabrillo. I was raised riding my bicycle on the streets of Los Angeles, so I'm a very hardcore urban bicyclist, I don't even consider myself part of the biking culture, I just tuck in my pant legs and off I go on my bike. So, I'm really part of the two percent that's preaching to the choir. I should mention I'm also co-managing the general plan update for the city of San José. What I'm really interested in is how we get that other 98 percent of people to ride bicycles. When I ride downtown with my fiancée, it's not a

problem. Downtown San José was built before the Second World War, and it's pedestrian- and bike-friendly, but when we leave the old urban core, my fiancée says, "That's it, I'm riding on the sidewalk now, I'm not going with you unless we can ride on the sidewalk." Of course, one of the unattended consequences of all the ADA [Americans with Disabilities Act] ramps that they put in is to have facilitated riding on the sidewalks. And I heard West Hollywood has passed a law that allows you to ride legally on the sidewalk. I have mixed feelings about that, and I'm not saying I'm advocating for it. But I am wondering whether, in the post-war auto-oriented parts of Silicon Valley with expressways and major, big, six-lane arterials when you get off the Caltrain or the light-rail station, if instead of having to ride with the quick-moving traffic on a major arterial, which is probably factually safe, but it doesn't feel safe, is the city looking at opportunities to make legal riding facilities on the sidewalk? That's my question.

MARK SIMON

I'm going to sound like a broken record, but this is a really good opportunity to once again tout the Grand Boulevard Initiative Forum on June 20 in Redwood City. I mention it because what you are talking about will require a whole re-thinking of how communities operate, maintain and sustain themselves financially. It begins with communities understanding that there's a financial model for their survival that doesn't necessarily rely on a strip of small, owner-occupied or fast food restaurants on El Camino. There's a way to do this that includes things like: Let's take portions of El Camino that are six lanes and make them four lanes, because studies that show that when you reduce the amount of lanes, traffic flow improves in automobiles, and there is room for bicycles and transit-dedicated lanes for skip-stop or express buses. There are a lot of things that can be done.

KEVIN KRIZEK

We often talk about different types of cyclists; A, B and C cyclists, which basically groups all cyclists, regardless of how frequently they cycle or the types of facilities they appreciate. But your question really gets at a larger issue that Malcolm Gladwell talks about: Who is that tipping point? Who is that latent demand? We don't really know that much about that population, but if I had to break the world down into four categories—and I think there are four categories when we talk about these related issues—then there's the one percent of people who are going to ride through good weather, bad weather, uphill both ways. Then there are around two-thirds of the population that's untouchable. They're not going to have anything to do with bicycling, so we shouldn't even try to bang our heads against the wall, because the best thing about banging your head against the wall is that it feels good when you stop. But 32 percent of the population fall into one of two categories: the people who cycle once a week but who we would like to see cycling three or four or five times per week, to work and the grocery. And then there are the people who have an old, rickety bike in the garage that just need some additional impetus, only 12 or 15 percent of the total population, and we're only expecting them to possibly bike eight, twelve, fifteen times per year, so we have to be realistic in our expectations here. Breaking the world down into these four categories, [and realizing] we are really only trying to tinker with roughly one-third of the population, is an important take-away point.

ALEXANDER SMITH

With transit, you have to make it fast and cheap and make sure people feel good about it. That overlaps into the bike world as well; if people can bike quickly and feel safe and secure, then they are more likely to do it. Commuting on a bike for the first time can be a bit daunting. I just did it in San Francisco. I didn't know which way to go, I looked at a route map, but I still didn't feel comfortable. But if someone shows you, and after you've done it once, then it's easy to do it again and get used to it. So making sure that biking is fast, and finding a way to lead people to it over and over.

JOHN BRAZIL

I agree with that—make it fast and cheap—but it only needs to be faster and cheaper than the alternatives, which is often the car. That's a whole other discussion, the Holy Grail. Biking doesn't have to be the fastest or the cheapest, but the reason a lot of people in denser communities walk or bike is because it's usually faster or cheaper than driving a car.

SHIRLEY JOHNSON

The SFBC has a program called Bike Buddies, and I am a Bike Buddy. If anybody wants to learn any route in San Francisco, call me.

KERRI HAYWOOD

I'm with the Moffett Park Business and Transportation Association. Part of our work is advocating for better infrastructure, but our biggest challenge is the latent demand and perception of public transit and bicycling. So many people love trains but they have a negative perception of buses. How do you change that? I'm still trying to find that magic wand, or pixie dust that will encourage people to try transit or get on a bike. Do some of you have some ideas that you've used or research? Once they try it a few times they usually buy in, but it's getting them over that first hurdle.

ALEXANDER SMITH

The LA Rapid Program that I mentioned did a phenomenal job of that with marketing and branding; a lot of it is image. The new service was over 30 percent faster. The ridership went up 30 percent. So it's just a matter of providing a branded service that is attractive and appealing and that people feel good about, people can get to their destination pretty quickly. People often don't like to stand next to a freeway and feel like that was a bad experience.

SEAN CO

A group in the Bay Area called TransForm did a study called Travel Choices, they went from door to door in certain neighborhoods, and provided people with transit information. That one on-one-contact was incredibly successful getting people to take the bus. And a lot of it was just showing people really small things: route information, where the bus stop was, and just how easy it could be.

KEVIN KRIZEK

Two points, both of which are somewhat serious, though the second is more flippant: There is a lot of research out there, but there no consensus about the degree to which separated cycling facilities actually lead to safer cycling environments. What the research does conclude, however, is that separated cycling facilities—particularly for B- and C-type cyclists—lead to an increased perception that cycling is safe. If the timid cyclists—the dads and moms with the Burleys on the back—perceive cycling is safe, then that will lead to increased use. And there is evidence that increased use leads to safer environments—that is, there is safety in numbers. Unfortunately, these separated facilities come with a large price tag.

Second, I don't know if anyone read David Byrne's review [of Jeff Mapes' *Pedaling Revolution*] in the *New York Times* "Book Review" this week, on how cycling culture is taking over America. I've only read chapters one and two so far, but it's very good; I highly recommend it to anyone. David Byrne was very congratulatory about the book. He says what we need is prominent people out there riding bikes, not only for racing-related purposes. What we are seeing right now is what I'm claiming to be the Lance Armstrong effect. Five years after the fact, we are enjoying the fruits of his labor, primarily racing-related endeavors that are slowly creeping into utilitarian endeavors. What Byrne says is that we really need good-looking women in skirts riding Dutch bikes in Manhattan. When we see that, we'll know we've arrived. There are some pictures of Jennifer Aniston on a Dutch-type bike out there, though she's not wearing a skirt. We need to promote that type of image and subsequently, good things will follow.

CORINNE WINTER

First, I would like to recognize Kerri for her efforts, because I probably know a little bit more than the other panelists about her particular situation at Moffett Business Park in Sunnyvale. Kerri, you're already doing a lot, and certain things just take time. You are already hosting events; and you're already really involved with promoting Bike to Work Day, other rides that you do and getting people out. But what Kevin was just saying is true; maybe finding some kind of utilitarian cycling ambassadors at the business park to wear short skirts would help quite a bit. And also, we've come a long way in terms of promoting cycling with CEO messaging and things like that, but more on the racer identity, so maybe putting some information up on your internal web sites and shifting a little bit of the focus into creating different types of heroes—people who aren't that type of cyclist, who are more of utilitarian cyclists—will inspire others to follow suit.

KEVIN KRIZEK

Corinne, my point wasn't that we need women in skirts riding bicycles, it's not the seductive element. It's the fact that we need good-looking women wearing skirts - that may be long and flowing - to show versatility, and that [biking in skirts] can actually be done!

SHIRLEY JOHNSON

You asked how to get over the hurdle of the negative perception, and I wanted to echo what these folks said about getting the word out there. When I go on business trips, the first thing I ask of the people where I'm going is how can I get from the airport to your plant by public transportation? And the answer I get, inevitably, is: It's impossible. So, I go on the Internet, and I have to do a lot of digging but I can find a bus from the airport to almost anywhere. It's very difficult, though. A lot of these transit systems are not connected, so you have to go to one web site, then try to find another web site, and connections, and for a lot of people that is the hurdle: just getting the information. I don't know who in this room can comment on that, but if transit companies could please connect their web sites to make it easier to get around, that would help a lot.

MARK SIMON

Through our partnership, we operate Caltrain—we're the managing agency—and we also run the bus service through San Mateo County. It's interesting because, nobody has ever asked for a toy bus set for Christmas. Trains generate a certain amount of caché and attention and excitement—not the same for buses. There's actually an Irish punk band [Fatima Mansions] that has a song called "Only Losers Take the Bus." I don't think that's really the case, but a lot people do believe that about the bus. A lot of people believe in mass transit, but they think someone else should use it. We see this at VTA with the 22 BRT system; it's phenomenally successful, in the economic downturn their ridership continues to go up.

Around here, it's true that transit should be faster, I don't know if it has to be cheaper—just cheap enough. The prime commodity for people in this area is not money, it's time. If you can get them where they want to go, when they want to go there, in a timely way, people will flock to it. The proof of that is, in 2005 Caltrain doubled the number of express trains we were running, and while our ridership is up more than 50 percent, our revenues are up more than 100 percent. Tragically, that doesn't solve our structural deficit, but it certainly indicates that it's the time that people find appealing. I also believe, knowing what I know about VTA buses and SamTrans buses, that once people get on, they cross a major threshold. It isn't the experience that they were fearful it was going to be: the trains are cleaner, safer and more comfortable, but the key is convincing them that it's timely.

JEFF SELZER

I'm actually one of the one percent; I race my bike and I commute by bike. I'm even probably more like one-third of one percent because I make my living in bikes. I manage Palo Alto Bicycles; I also manage the Bikestation at Palo Alto, which is the bike commuter hub at Palo Alto Caltrain station. As I see it, there are two problems that I've got getting people on bikes. First, and far and away the most important, is safety; they're afraid. Speaking to your point that there's a certain percentage of people that we don't want to touch, I agree.

The second issue is that people can't get where they need to go safely. Creating an infrastructure that gets people from point A to point B safely on a bike, will do more to get people on bikes than anything else—anything. So, here's my question: first off, how do you get that to happen? Mark, you mentioned a couple of times that money is the big issue. My understanding is it runs about $25- to $60- or $70,000 per spot to put in and maintain a car parking spot. How do we get government to shift their thinking—$25 or $50- or $100,000 is more important than spending $20,000 annually just to stripe some streets. I'm challenged with society's tendency to honor what their government honors. If we're going to tell the, this is where we are going to spend the money and this is what we think is important, that's where they're going to expect that money to be spent. How do we make that shift on the government level?

JOHN BRAZIL

Those are good points: it's the perennial challenge. If you go back to my notion that two percent of people ride bikes and the other 98 percent don't, and then you add transit users, the fact is in the San Francisco Bay Area, except for a few dense spots, we're a car-oriented community, so that's why the question you pose is so challenging. The majority of people, right now, want to drive everywhere they go. I'm saying this with tongue firmly implanted in cheek: We enlightened few have another idea that maybe transit and biking and walking are good, so how do we persuade our electeds to support that? It's not easy. We're in the minority so it's hard, but she who cries loudest is heard first. It's about mobilizing people with our same vision and communicating that vision to our electeds. Ask any elected, and they'll tell you, I'm going to listen first to the people who contact me. They only have so much time in the day.

JOHN CICCARELLI

I'm the owner of Bicycle Solutions, an independent consulting, education and infrastructure business; and a transportation planning consultant specializing in bicycling and walking. First, regarding the A, B, C cyclist categorization that's been around for many decades: The differentiating factor there is not necessarily fear but understanding how traffic works. "A" cyclists understand how bikes work in traffic and how traffic works around bikes. "B" cyclists are adults who understand driving from a car perspective but don't understand how to apply that to bikes. "C" cyclists are children who lack both the car driving understanding and the bike driving understanding. By far, the most effective way to turn a "B" cyclist into an "A" cyclist—and it can happen in 10 hours—is to educate them. There are several of us on the panel and in the audience here who are cycling educators. Bicycle driver education/instruction is one of those things that's on the cusp, and I would like to know what each agency—I know John Brazil's answer and I know Corinne's answer—is doing. That's my question.

Regarding transit infrastructure, I have two suggestions. First, I think it's time to think about standardizing the onboard space for folding bikes and folding implements like scooters, because this can dramatically increase the capacity without adding full-size bike space. There are many people bringing folders onboard, like me—I ride a Brompton bicycle—who could store their bike twice or three times as densely if a space were provided specifically for that purpose.

Second, I'll close with a more blue-sky concept. Mark, you mentioned the caché associated with trains, and the crossways commute issue—that we don't have train lines that go east-to-west around here. Has any thought been given to combining express buses, especially on routes like the Monterey Highway and the Half Moon Bay route? With high-capacity bike trailers, you have one bike space per seat. And at express stops, you don't have to stop at every local stop as with pedestrians; every two miles would be fine. That would basically be a bus that approximates a train.

MARK SIMON

That is an interesting idea. There is no shortage of good ideas, the question is: which one of them do you do first and how do you pay for it? It's the same dilemma. We all want to do as much as we can, but we are limited by either the physical constraints of our system or by budgetary constraints.

SEAN CO

John, referring to your comments, I had a discussion just this morning about driver education. The DMV handbook in California is undergoing some changes in order to integrate more bicycles, and there's been talk of making it not necessarily a car driver handbook but more of an operator handbook. More effort could be made at the state level to educate not just about driving cars, but about bikes on the road, and how you should operate a bike.

MICHELLE DE ROBERTIS

I'm Michelle DeRobertis, of the Valley Transportation Authority. My question pertains to the chronic funding shortfall we have for bicycle pedestrian facilities in our county, state and nation. To make it simple, would each of you support a dedicated gas tax for bicycle and pedestrian facilities that could fund infrastructure, including access to transit infrastructure, and be modeled after the existing TDA (Transportation Development Act) Return to Source gas tax that we already have, so it would be really easy to implement? If my calculations are correct, a simple one-cent per gallon gas tax could return to Santa Clara County alone $10 million a year, and I don't think any of us would even notice a one-cent per gallon gas tax. That would be a lot of money. Do I hear some support?

GARY RICHARDS

I think a lot of people in the transportation industry would support a gas tax; the problem is the voters. I believe the MTC [Metropolitan Transportation Commission] has had on the books the ability for the last 10 years to put up to a 10-cent per gallon gasoline tax on the ballot, but every time they take a survey, 30-something percent are against it.

SEAN CO

It just doesn't poll well.

MICHELLE DE ROBERTIS

I think we should poll one cent per gallon dedicated to bike and pedestrians; they've never done that particular poll.

ALEXANDER SMITH

The Highway Trust Fund is going bankrupt and needs to find a new solution. It has been adjusted for inflation. That, along with more efficient vehicles, is a big problem. That is something that is being very actively debated in the re-authorization discussions and we'll continue to pursue ways to better fund highways, including transit. I'm not sure what they're going to come up with, but certainly raising fuel tax could be part of the solution, or adjusting it for inflation rather than just tacking another cent on.

CORINNE WINTER

Funding is really the crux of the issue, and it's obviously not looking good in the current economic climate. Whether you're talking about programs for education to generate awareness; staff time to revise the driver's handbook; or the actual infrastructure improvements, which we all know are quite a bit more expensive, all of it is using funding and that has to come from somewhere. Another interesting thing to watch, especially here in Santa Clara County, are the HOV lane ideas. Bicycle and pedestrian activists should pay attention to this and make sure the funding allows for recycling back into bicycle and pedestrian improvements in that transit corridor. Santa Clara County in particular is looking at the possibility of having a lot of those funds getting recycled Bay Area-wide. With possible legislation happening on this front, that's a concern a lot of people have brought up.

KEVIN KRIZEK

Kerri, I can't help but point to, and this speaks to your position as well, Jeff. We're in California, and I'm sure, in this room, land of Don Shoup and the Shoupistas. Look to the success story of Pasadena, charging for odd-end street parking and then re-circulating that revenue back into community investments, which could be bicycle-related as well. That's a real, valuable opportunity.

JOHN CARPENTER

I live in Mountain View. For the past several years, I have been surveying the bicycle traffic at Stevens Creek Trail, right under the 101 freeway. I picked a midweek day for consistency and I picked the morning commute hour and, I survey it for about an hour and 15 minutes. In the year 2000, I counted about 35 bicycles in an hour and 15 minutes. This last time, a couple of weeks ago, I counted 131 bicycles in the same amount of time. What has happened in that time is that Stevens Creek Trail has been lengthened, and it now provides non-stop, just about fully graded access between the southwest point of Mountain View and the Shoreline area. It allows bicycles to overcome all sorts of barriers, like freeways and Caltrain tracks, producing increased traffic.

The Mary Avenue bridge across 280 and the trip between Mountain View and DeAnza College can now be accomplished in about 40 minutes, which is fairly competitive with a car, simply because you would have to park and walk from a car. If you remove barriers, you can increase bicycle traffic.

I want to point out that the secret to the European 40-percent bicycling is, along with superior transit service, an aggressive fuel tax, always adjustable to inflation.

ANDREW CASTEEL

I'm Andrew Casteel, and I'm with the Bay Area Bicycle Coalition. I wish Mark was here still, because I wanted to thank him for the ride I got this morning on Caltrain. I got on at the 22nd Street station, which is often a gamble when you're a bicyclist, because everybody gets on at 4th and King Street with their bikes. But the train had two bike cars, which is part of their new effort to get two bike cars on a lot of the rush-hour trains. I noticed that it took a lot less time to board, because we had two options for boarding. So I was going to say that adding capacity reduces dwell time.

The other thing I want to say is that one of the benefits of bicycling, and we heard many from the panelists, is the consistency it provides. I like to use my bike to connect to transit because I know exactly how long that will take. I don't have to meet another transit operator at a certain time. Sometimes schedules aren't well-connected, so that consistency is an important part of biking.

And my question for the panelists is converting B-type bicyclist to A-type bicyclists. One of the better ways is to have cyclovia-type activities. They have Sunday Streets in San Francisco where they close off some streets and have people re-envision them as places for people to walk and bike and use for things other than driving. I was curious if there were other efforts in the area that you know of, or in the nation, that are trying to close off some of the car space for pedestrians and bikes?

JOHN BRAZIL

There is a lot of community interest in cyclovia-type events. As you know, San Francisco started Sunday Streets last year and is having more this year. Lots of larger cities are having cyclovia-type events, where streets are temporarily open to pedestrians and bicyclists, which means closed to cars. It's a great community event. It's not a parade; it's not an art and wine festival; it's an opportunity to take the streets back and enjoy them in a peaceful manner. There was a presentation at a national conference last year at which the largest cities in the United States that have adopted this type of program addressed the logistical challenges. I think it's a great idea, but there are some budgetary issues that need to be addressed to operate these. New York, Chicago, Seattle, Portland, and a lot of big cities like San Francisco have done so.

KEVIN KRIZEK

I currently live in Boulder, which probably has the highest per capita number of professional cyclists and tri athletes of any community in the country, other than maybe some of these smaller California communities. I hesitate to point to Boulder as a example community because there are so many abnormalities about Boulder; it's often said, If you

want directions to Boulder, you take this road to the end of reality and then you take a left, which I have to say is true. But as I look around Boulder, there are a lot of type A cyclists, but the reason that Boulder has achieved its level of status, which is now platinum, is not because of them. It's because of the type B cyclists, that have no interest in becoming type A cyclists. Boulder has catered to those type B cyclists through redundancy. In other words, there's a lot of talk in the cycling world about [either] putting a paint stripe down in the road or building an additional facility. But somehow in Boulder, they've been able to do both because it's not an either-or type issue; there are different types of users. There are always going to be type B commuters and they're only going to want [B-]type facilities, primarily. I don't think trying to convert type B cyclists into type A cyclists is a productive endeavor.

JEFFREY OLDHAM

I ride Caltrain, VTA light rail and my bicycle to get work in Mountain View, where I work at Google. Shirley raised an interesting question, the information question. How do I get the information about where to ride my bicycle in the first and last mile, plus how to connect with the public transportation system? She pointed out that public transportation agencies web sites don't play with each other. I was very briefly involved with Google Transit, which has partially solved this problem. They have a web site where you get public transportation information for agencies that choose to participate. Now, there's a huge effort to get this done, but it turns out the biggest difficulty is getting public transportation agencies to make their information available. Google Transit has made an API available, for free, that has set a standard in the public transportation world. I encourage public transportation agencies to use it. Once that information is available electronically, any company can use that information, whether they want to compete with Google Transit or put it on Twitter.

So here's my question for the panelists: To help solve the first- and last-mile problem, how do we encourage public transportation agencies to make their routes and schedules available electronically, and how do we encourage cities and counties to make their bicycle information available electronically, so that companies such as Google can make this sort of information available to commuters?

SEAN CO

On our web site, 511.org, and 511 phone line, we have a Take Transit planner, from which Google Transit gets a lot of its information. You can put in your origin and your destination and it will tell you how to get there by transit. We also have the 511 BikeMapper web site. It's up now but undergoing a lot of improvements, so it will work in the same way: you put in your origin and destination and it will recommend a route for you to get there.

JEFFREY OLDHAM

Are those two integrated with each other?

SEAN CO

The bike map will be integrated with the Take Transit 511.org web site, but not right now.

NATHAN LANDAU

I'm a planner for AC Transit. We are a bus-only agency; we're trying to encourage more people to ride bikes to the system. There's a lot I'd like to talk about but what I'll focus on is the question of stigma and connection. To some extent, we're hoping cyclists will help get out the word about bus transit. I think that has happened to some extent, but a lot of our services do have stigma. Our Transbay service to San Francisco doesn't seem to. And while it's great to link up to Caltrain, if you really want to develop the bike to transit connection and build a mass system, you need to link up to the bus system as well as about 60 percent, or maybe a little more, of Bay Area transit trips are taken by bus.

BOB BARRY

I see real problems for transit agencies trying to handle masses of bicyclists taking their bicycles with them. I think if there's an adequate network of secure bike parking and people know about it, the transit agencies should try to tell people, Have two bicycles: One to go between home and transit, the other being transit to work. I think that's better than trying to accommodate lots of bicycles on mass systems.

SHIRLEY JOHNSON

I agree that will work for some people, and that's great, but it won't work for everyone—for me and 40 percent of the cyclists who ride Caltrain and vary our commute pattern. I get on at 4th and King in the morning, but when I come home I get off at 22nd Street. And I go to meetings in Palo Alto and in Menlo Park. I would have to have many bikes and I would have to re-shuffle.

BOB BARRY

That doesn't really work now because there's not a good network of bike parking. There are a lot of B people who would use bike parking if it existed, and the A people would do the same as they do now.

GARY RICHARDS

I'm sorry, but that's all we have time for today. Oh behalf of the Mineta Transportation Institute, the Commonwealth Club and our other co-sposors, thanks for your input and for attending today.

ABBREVIATIONS AND ACRONYMS

ADA	Americans with Disabilities Act
API	Application programming interface
BART	Bay Area Rapid Transit
CMAQ	Congestion Mitigation Air Quality
DMV	Department of Motor Vehicles
DOT	Department of Transportation
FTA	Federal Transit Administration
FHWA	Federal Highway Administration
HOV	High-occupancy vehicle
MTA	Metropolitan Transportation Authority, Municipal Transportation Agency
MTC	Metropolitan Transportation Commission, Municipal Transportation Commission
NEPA	National Environmental Policy Act
SamTrans	San Mateo County Transit District
SFBC	San Francisco Bicycle Coalition
STP	Surface Transportation Program
SVBC	Silicon Valley Bike Coalition
TDA	Transportation Development Act
TE	Transportation Inhancement
VTA	Valley Transit Authority

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