

# **Palo Alto Comprehensive City Plan Transportation Ideas Analysis July.14<sup>th</sup> 2015**

## **Introduction**

### **I. Background**

On 30th of May 2015 about 300 Palo Altans gathered to ideate and deliberate in the Palo Alto Summit about three issues facing their city: Transportation, housing and growth management. The Summit was organized by the City of Palo Alto. The Summit participants were divided to several small groups that discussed and brainstormed about those three topics. After each brainstorming session, the group leaders sent three top ideas from the group to the Summit organizers. Besides the Summit day, City Council had posted questions asking the top three things that motivate citizens to drive less on Nextdoor (a forum for community discussion) months before the Summit, and after the Summit, on the Open City Hall of Palo Alto website, a virtual meeting is going on, collecting citizens' feedbacks on city's major corridor and innovations to maintain the treasured quality and livability of Palo Alto's neighborhoods.

### **II. Methodology: Idea analysis and categorization**

We analyzed and categorized the ideas gathered in the Summit, Nextdoor and Open City Hall by using an open coding method (Strauss and Corbin, 1998)<sup>1</sup>. We first analyzed a pilot patch of the ideas in each main category: *Transportation*, *Housing* and *Growth Management*, and we assigned initial subcategories in each main category. Each text message contained several ideas, and we separated the ideas for the analysis. For instance, the following text message was sent from a group discussion: "*Transportation for students: shuttles and more bike lanes, On demand shuttles/carpools.*" There are several ideas here: More shuttles, bike lanes, on-demand shuttles and carpools for students. These were separated as ideas for the analysis.

We then analyzed all the ideas, and revised the categories after the first round of coding. Some categories were merged and some new categories emerged. Finally, we compared the coding categories between the main categories, and summarized the finding. There were four researchers conducting the coding, and unclear ideas and category allocations were discussed and resolved collaboratively, and in most cases, clarity could be found. The ideas were submitted as short lists, typically without further reasoning or background, and therefore, in some cases, the idea remained ambiguous, and could have belonged to several categories. However, we assigned a primary category for each idea. About 10 [update after the final analysis] were removed because they were off-topic.

### **III. Constraints of the data**

It is important to note that the ideas are from a small group of Palo Altans, from about 300 Summit participants, 56 responses from the Nextdoor, and 29 responses from the ongoing Open City Hall virtual meeting. That is not a statistically representative sample of the residents

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<sup>1</sup> Strauss, A. L., and J. M. Corbin. 1998. Basics of qualitative research: techniques and procedures for developing grounded theory. 2nd ed. Thousand Oaks: Sage Publications.

in Palo Alto, and therefore, the ideas shouldn't be treated as a "the voice of the Palo Altans." Furthermore, the Summit ideas were summarized from group discussions in the Summit. Each group leader was asked to summarize the top three ideas to a text message, which was then sent to the Summit organizer. Most likely, not all the ideas that were presented and discussed ended up to the text messages, yet there most likely was some degree of consensus about the top ideas.

In this report, we present the transportation issue results from Summit Ideas, Nextdoor Ideas, and some of the ongoing Open City Hall virtual meeting, starting from a summary of main trends in each main category.

## **Section 1: Summit Idea Analysis**

### **I. Main Category: Transportation**

#### **Summary of main trends in transportation ideas**

Altogether 158 ideas were identified in participants' input in the Palo Alto Summit from 57 users (the group discussion leaders).

The ideas were categorized to the following four main categories: Public transit, Non-motor powered transit, Private transit, and Big picture infrastructure, as summarized in Table 1. There were 138 unique ideas in the data; meaning ideas that are not replicates.

In the following we show how the ideas are distributed to the main categories and subcategories under them.

#### **Public transit**

When examining by numbers, most ideas about transportation were about public transit. The participants proposed a wide array of ideas for improving public transit in Palo Alto, such as public self-driving cars, on-demand and personalized public transit options and public shuttles. Many wanted to move Caltrain underground to ease congestion around the rails. In general, a need for more frequent, more personalized public transit with a wider geographical reach was proposed.

#### **Non-motor powered transportation**

The second most popular category in transportation were ideas about non-motor powered transportation, that is, transit options for pedestrians and bicycles. Most ideas in this category were about improving infrastructure for pedestrians and bicyclists: bike lanes, bike corridors, and pedestrian paths. Many ideas also proposed more options for biking: bike sharing, electric bikes, and safe bike parking.

#### **Private transit**

The third most popular category in transportation ideas was private transit. In this category, the participants proposed ideas about increasing carpooling with personalized carpool options and incentives for carpooling. With personalized carpools the participants meant on-demand carpools, uber pools and car pools located in neighborhoods.

#### **Big picture infrastructure**

The fourth category included ideas about transit infrastructure in large scale, so we decided to call it 'Big picture infrastructure'. The category included ideas for improving traffic conditions by road infrastructure management and improving traffic signals.

**Table 1. Ideas about transportation categorized in two subcategories.**

Main category	Subcategory 1	Subcategory II
Transportation	Public transit	Personalized public transit Public shuttles Infrastructure Public transit modes Last mile connections Others
	Non-motor powered transportation	Infrastructure Biking safety More biking options Traffic law enforcement on bikers
	Private transit	Carpools Parking Pollution Reducing private driving
	Big picture infrastructure	Road management Improving traffic signals Implementing existing programs Better communication Congestion pricing Improving East/West Palo Alto connectivity Caltrain

**Key trends: Personalized, on-demand services**

Across the four categories, we saw the following five key trends emerge:

- i) Personalization of public transit: on-demand services, servicing individual schedules and neighborhoods better
- ii) Better connectivity in public transit
- iii) More parking lots for commuters
- iv) Use of technology in transit: More seamless schedules, self-driving cars
- v) More route options for bicyclists and pedestrians

## II. Summary about each main category in ‘Transportation’

### A) Public transit

Under the main category of Public Transit, ideas were further divided to six subcategories: Personalized public transit, Public shuttles, Infrastructure, Public transit modes, Last mile connections, Others, as shown in Table 2 and Figure 1.

**Table 2. Idea subcategories in Public transit.**

Main Category	Subcategory I	Subcategory II	Subcategory III
Public transit	Personalized public transit	Public self-driving cars On demand public transit Rapid bus transit Personal rapid transit Electric buses Trolley	
	Public shuttles	Shuttle types	Neighborhood shuttles Parking shuttles Employee shuttles Student shuttles
		Shuttle modes	Increasing frequency Expanding geographically
		Public shuttles funded by businesses	
		Signage at shuttle stops	
	Infrastructure	Underground Caltrain Public transit corridors	
	Public transit modes	Increase frequency Expand geographical reach	
	Last mile connections	Better coordination between public transit modes Solve the “last mile” problem	

		On-call self driving cars between transit hubs and employment destinations Smart last mile shuttles	
	Others	Public transit map applications Public education on the benefits of public transportation Cheap fares for in-town Caltrain rides Improving public transit in California Ave	

**Personalized public transit**

This subcategory includes ideas about Public self-driving cars, On demand public transit, Rapid bus transit, Personal rapid transit, Electric buses and Trolley.

**Public self-driving cars**

In this category the ideas proposed public self-driving cars for Palo Altans to use.

**On demand public transit**

In this category the ideas included on-demand public transit options; that means shuttles and buses.

**Rapid bus transit**

The ideas proposed more rapid bus transit options, e.g. on El Camino Real, and all the way from San Jose to San Francisco.

**Personal rapid transit**

The ideas proposed personalized rapid transit, which can mean, for instance public transport mode, which features small automated vehicles operating on a network of specially built guideways.

**Electric buses**

The ideas proposed electric buses and rapid electric buses.

**Trolley**

The idea proposed a trolley service on Alma street.

**Public shuttles**

This subcategory was further divided to the following subcategories: Shuttle types, Shuttle modes, Public shuttle funded by businesses, Signage at shuttle stops.

**Shuttle types**

The ideas proposed neighborhood shuttles, parking shuttles, employee shuttles and student shuttles. The ideas reflect a need for shuttles that would serve certain neighborhoods, parking lots and companies.

**Shuttle modes**

The ideas proposed increasing frequency of existing public shuttles and expanding the geographical reach of shuttles.

**Public shuttles funded by businesses**

The idea proposed shuttle services that would be funded by retail businesses.

**Signage at shuttle stop**

The idea proposed a more clear signage at existing shuttle stops.

**Infrastructure**

This subcategory has two subcategories: Underground Caltrain and Public transit corridors

**Underground Caltrain**

The ideas proposed putting Caltrain underground, and using the remaining space from on the top for housing, parks, bike and pedestrian paths.

**Public transit corridors**

The ideas proposed transit corridors that are designated for public transit only.

**Public transit modes**

This category had two subcategories: Increasing frequency and expanding geographical reach.

**Increasing frequency**

The ideas proposed more frequent bus and train schedule.

**Expanding geographical reach**

The ideas proposed expanding the geographical reach of public transit, namely more bus routes in neighborhoods. The routes should connect to 'feeder streets', like Alma, Park Boulevard, and Middlefield.

**Others**

This category included two topics: Public transit map applications and Public education on the benefits of public transportation.

**Public transit map applications**

These ideas proposed a better use of technologies to connect public transit users with public transit.

**Public education on the benefits of public transportation**

These ideas proposed awareness-raising programs to encourage people to use public transport.

**Cheap fares for in-town Caltrain rides**

**Improving public transit in California Ave**

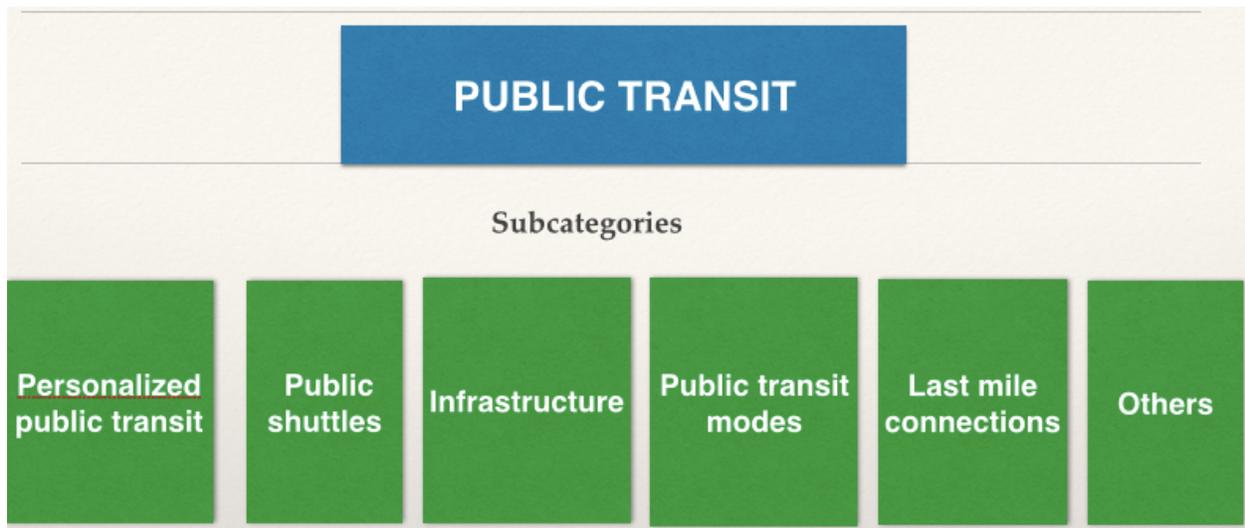


Figure 1. Idea categories in Public Transit

**B) Non-motor powered transit**

The ideas in our second main category, Non-motor powered transit category, were further divided to four subcategories: Infrastructure, More biking options, Awareness-raising programs on the benefits of biking, and traffic law enforcement on bikers.

- **Infrastructure:**

The subcategory Infrastructure includes ideas about adding bike corridors, improving walkability and improving biking safety.

- **Bike corridors:**

Most of the ideas propose that, once the Caltrain is underground, we should replace the surface rails by bike corridors. There is also one request to improve the bike corridors between East/West Palo Alto.

**Biking safety:**

These ideas concerned biking safety training and reconfiguring streets to improve biking safety.

- **More biking options:**

The category More biking options includes ideas about more bike sharing options, electric bikes, low cost/free bikes, more bike repair and pump stations, and secure and convenient bike parking.

- **Traffic law enforcement on bikers:**

The category Traffic law enforcement on bikers consists of an idea regulating bicyclists to ensure a safe environment.

Main Category	Subcategory 1	Subcategory 2
Non-motor powered transit	Infrastructure	Bike corridors Improve walkability

		Improving biking safety
	More biking options	More bike sharing options Electric bikes Low cost/free bikes More bike repair and pump stations Secure and convenient bike parkings
	Traffic law enforcement on bikers	Regulating bicyclists to ensure safety

### C) Private transit

The ideas in our third main category, private transit category, were further divided to four subcategories: Carpools, Parking, Pollution, and Reducing private driving. These subcategories are elaborated in more detail in the following, and summarized in Table 3.

**Table 3. Subcategories in Private transit.**

Main Category	Subcategory 1	Subcategory 2	Subcategory 3
Private transit	Carpools	Personalized carpool systems	On-demand carpools Uber-pooling Neighborhood carpools Employee carpools Zip car pools
		Incentives for carpooling	Retail discounts for carpoolers Parking benefits for carpoolers Reward programs for carpooling
		Others	More carpool lanes Pooling commute traffic
	Parking	Parking passes Parking infrastructure	
	Pollution	Cap- and-trade for car trips Non-regressive carbon tax Leveraging alternative fuel vehicles Public education on	

		environmental effects of driving	
	Reducing private driving	Incentives for reducing car ownership Cap on private transit Incentivize businesses to reduce employee commutes via technology and transportation Telecommuting	

- **Carpools**

The subcategory Carpools was further divided to three subcategories: Personalized carpool systems, Incentives for carpooling and Others.

- **Personalized carpool systems**

Personalized carpool systems included ideas that proposed on-demand carpools, Uber-pooling, neighborhood carpools, employee carpools and Zip car pools.

- **Incentives for carpooling**

This category included ideas that proposed retail discounts for carpoolers, parking benefits for carpoolers and reward programs for carpooling.

- **Others**

This category included ideas proposing more carpool lanes and pooling commute traffic in general.

- **Parking**

The subcategory Parking included two subcategories: Parking passes (5) and Parking infrastructure.

- **Parking passes**

Parking passes included ideas that proposed more expensive parking passes, limited or shared parking passes, frictionless parking and parking passes for special events.

- **Parking infrastructure**

Parking infrastructure included ideas that proposed more peripheral parking lots , for example by Highway 101, and more parking for handicaps.

- **Pollution**

The subcategory Pollution consists of ideas in four subcategories: Cap- and-trade for car trips, Non-regressive carbon tax, Leveraging alternative fuel vehicles, and Public education on environmental effects of driving.

- **Cap-and-trade for car trips**

This idea proposes cap- and trade procedure for car trips for employers in downtown. This is how the cap-and-trade procedure works: The “cap” sets a limit on emissions, which is lowered over time to reduce the amount of pollutants released into the atmosphere. The “trade” creates a market for carbon allowances, helping companies innovate in order to meet, or come in under, their allocated limit. The less they emit, the less they pay, so it is in their economic incentive to pollute less.

**Non-regressive carbon tax**

This idea proposes a non-regressive carbon tax to reduce CO2 emissions.

**Leveraging alternative fuel vehicles**

The idea proposes an increased use of alternative fuel vehicles.

**Public education on environmental effects of driving**

This idea proposes more education about the environmental effects of driving.

- **Reducing private driving**

The subcategory Reducing private driving consists of two subcategories: Incentives for reducing car ownership and Cap on private transits.

**Incentives for reducing car ownership**

This category included ideas that propose a tax on car ownership, and eco-pass subsidies for those who reduce car ownership .

**Cap on private transit**

This idea proposed an ultimate cap for private driving, prohibiting new net car trips for downtown area and research park.

**Incentivize businesses to reduce employee commutes via technology and transportation**

**Telecommuting**

## **D) Big picture infrastructure**

The fourth main category Big picture infrastructure was further divided to six subcategories: Road management, Improving traffic signals, Improving East/West Palo Alto connectivity, Implementing existing programs, Better communication, Congestion pricing, and Caltrain. These subcategories are described in more detail in the following, and summarized in Table 4.

- **Road management**

Road management includes ideas proposing reversible lanes, traffic solution management along feeder roads, safe school routes support, and a request to fix Palo Alto high school crossing.

- **Improving traffic signals**

The subcategory Improve traffic signals includes ideas proposing smarter coordinated traffic signals, more advanced traffic signals technology, and a request to fix Embarcadero/ El Camino intersection lights.

- **Implementing existing programs**

The subcategory Existing programs implementation includes two requests: to implement recommendations from the existing “City of Palo Alto Rail Corridor Study and Bicycle, and to implement the existing “Pedestrian Transportation Plan”.

- **Better communication**

The subcategory Better communication includes ideas proposing better communication of public services via websites and making the leverage data and analysis tools public.

- **Congestion pricing**

Congestion pricing consists of surcharging users of public goods during peak hours.

- **Improving East/West Palo Alto connectivity.**

This idea consists in improving the connectivity between East and West Palo Alto by building underpasses.

- **Caltrain**

This category is composed of 2 ideas: Replacing University/Alma Caltrain Interchange and Minimizing impact of electrification and high speed rails.

**Table 4. Subcategories in the Big picture infrastructure.**

Main Category	Subcategory 1	Subcategory 2
Big picture infrastructure	Road management	Reversible lanes Traffic solution management along feeder roads Safe school routes support Fix Palo Alto High School crossing
	Improving traffic signals	Smarter coordinated traffic signals More advanced traffic signals technology Fix Embarcadero/ El Camino intersection lights
	Implementing existing programs	Implement the City of Palo Alto Rail Corridor Study and Bicycle Implement Pedestrian Transportation Plan
	Better communication	Better communication of public services via websites Leveraging data and analysis tools public
	Congestion pricing	Congestion pricing for peak hours
	Caltrain	Replacing University/Alma Caltrain Interchange Minimizing impact of electrification and high speed rails.

## **Section 2: Nextdoor Ideas Analysis**

The idea analysis method we utilized for Nextdoor is the same as that in the Summit. We came up with four main categories as those in the Summit and further analyze subcategories under each main category.

### **I. Main Category: Transportation**

#### **Summary of main trends in transportation ideas**

Altogether **85** ideas were identified in participants input in “the Next Door” from **56** users.

The ideas were categorized to the following four main categories: Public transit, Non-motor powered transit, Private transit and Big picture infrastructure, as summarized in Table 1. There were **71** unique ideas in the data; meaning ideas that are not replicates.

In the following we show how the ideas are distributed to the main categories and subcategories under them.

#### **Public transit**

The second most popular category in transportation is public transit. The participants proposed a wide array of ideas for improving public transit in Palo Alto, such as schools buses, neighborhood shuttles and ride sharing applications. In general, participants expressed a need for more comprehensive and frequent public transportation system.

#### **Non-motor powered transportation**

When examining by numbers, most ideas about transportation were about non-motor powered transportation, that is, transit options for bikers. Most ideas in this category were about improving infrastructure for bikers: protected bike lanes and exclusive bike boulevards. Many participants also asked for a better bike theft prevention that is safer bike parking and more bike racks in front of businesses. Furthermore, other participants asked for more biking options: more rental and pumping stations, bike share locations. One participant even proposed that the city of Palo Alto should pay Palo Altans to bike.

**Private transit** The third most popular category in transportation ideas is private transit. In this category, the participants asked for more law enforcement on dangerous drivers. Participants also asked for more personalized transit options like zip cars with electric golf cars. Meanwhile, other participants proposed to create a special “gas” tax and encourage telecommuting to ultimately reduce private driving.

#### **Big picture infrastructure**

The fourth category included ideas about transit infrastructure in large scale, so we decided to call it ‘Big picture infrastructure’. In this category, road safety was the participants’ main preoccupation. For instance, some participants asked for more bumps and more signs to alert drivers to share the road while others proposed to have buttons at traffic lights that stop the auto traffic to let bikes across. Moreover, some ideas suggested to replace lights by roundabouts to reduce traffic.

**Table 1. Ideas about transportation categorized in two subcategories.**

	Main Category	Subcategory
Transportation	Non-motor powered transit	Infrastructure Bike theft prevention More biking options
	Public transit	Public transit Modes Public shuttles More school buses Subsidies to public transit Incentives to use public transit Others
	Private transit	Law enforcement Reducing private transit Personalized private transit
	Big picture infrastructure	Road infrastructure Education on safe driving Completion of Charleston-Arastradero Plan and other bike boulevard projects

**Key trends: Safety, efficiency and law enforcement**

Across the four categories, we saw the following five key trends emerge:

- i) Protected bike lanes and boulevards
- ii) bike locks in front of retail stores to prevent bike theft
- iii) More efficient public transit
- iv) Law enforcement on aggressive and distracted drivers
- v) Promoting Road safety through a better infrastructure and raising-awareness programs

**II. Summary about idea categories in ‘Transportation’**

**A) Public transit**

The ideas in the first main category, Public Transit, were further divided to six subcategories: Public transit mode, Public shuttles, School bus, Subsidizing public transit, Incentive to use public transportations, Others, as shown in Table 2 and Figure 1.

**Table 2. Idea subcategories in Public transit-category.**

Main Category	Subcategory I	Subcategory II	Subcategory III
Public transit	Public transit modes	Increasing public transit frequency and expanding geographical reach	

		<b>Note: Here participants mentioned both frequency and geographical reach.</b>	
		Increasing public transit frequency <b>Note: Here participants <u>only</u> mentioned the frequency</b>	More frequent Caltrain More frequent public transportations in general
		Expanding public transit geographical reach <b>Note: Here participants <u>only</u> mentioned the geographical reach.</b>	Expand VTA light rails to Palo Alto  More comprehensive public transportation
		Faster public transit	
	Public shuttles	Neighborhood shuttles Last mile connection shuttles Shuttle service on the Arastradero/Charleston corridor	
	School Bus		
	Subsidizing public transit		
	Incentives to use public transit	Free public transit	
		Less expensive Caltrain	
	Others	Ride sharing application	
		Underground Caltrain	
		Bus lanes	
		Tram system	
		Disabled only bus	

### **Public transit modes**

This subcategory has four subcategories: Increasing public transit frequency and expanding geographical reach, Increasing public transit frequency, expanding geographical reach and faster public transit.

- **Increasing public transit frequency and expanding geographical reach**

Here participants mentioned both frequency and geographical reach.

- **Increasing public transit frequency**

In this subcategory, the ideas focus more on the frequency than on increasing geographical reach. Most of the ideas are demands for a more frequent Caltrain.

- **Expanding public transit geographical reach**

In this subcategory, the ideas focused more on expanding the geographical reach than on the frequency. One participant asked to expand the VTA light rails to Palo Alto while another asked participant asked for a more comprehensive public transit.

- **Faster Public transit**

### **Public shuttles**

This category was further divided to the following subcategories: Neighborhood shuttles, last mile connection shuttles and Shuttle service on the Arastradero/Charleston corridor.

- **Neighborhood shuttles**

Here, participants proposed to expand public shuttles into more neighborhoods

- **Last mile connection shuttle**

Additional shuttles connecting south Palo Alto to trains, jobs and schools.

- **Shuttle service on the Arastradero/Charleston corridor**

### **School Bus**

More school buses to reduce private commute.

### **Subsidizing Public transit**

Here participants suggested that the city of Palo Alto should subsidize public transit.

### **Incentives to use public transit**

This category contains two ideas: Free public transit; Less expensive Caltrain.

### **Others**

This category contains 5 ideas: Ride sharing application, Tram system, Underground Caltrain, Bus lanes, Disabled only bus.

- **Ride sharing application**

Safe ride sharing apps exclusively reserved to known community people.

- **Tram system**

A tram system that goes everywhere in Palo Alto, Mountain View, Menlo Park.

- **Underground Caltrain**

- **Bus lanes**

Special bus lanes

- **Disabled only bus**

Buses reserved to people with disabilities.

## **B) Non-motor powered transit**

The ideas in the second main category, Non-motor powered transit category, are further divided to three subcategories: Infrastructure, Bike theft prevention, and More biking options.

**Infrastructure**

The category infrastructure is further divided into 4 subcategories: Bike lanes, safe bike crossings, more bike friendly streets, and better biking safety.

- **Bike lanes**

The subcategory bike lane contains 5 different ideas: protected bike lanes, bike boulevards, more bike lanes, smoother bike lanes, and off-road bike paths.

- **Safe bike crossings**

Safe bike crossing in busier streets like El Camino and in major highways like 101.

**More bike friendly streets**

**Better biking safety**

**Bike theft prevention**

The category Bike theft prevention contains the following ideas: safer bike parking near retail stores, more bike racks in front of businesses, more bike lock locations, better bike parking, more bike parking in shopping districts.

**More biking options**

This category contains 4 different requests: more pump stations, more bike rentals, more bike share locations and financial compensation paid by the city of Palo Alto to those who bike.

Main Category	Subcategory I	Subcategory II	Subcategory III
Non-motor powered transit	Infrastructure	Bike lanes	Dedicated bike boulevards Protected bike lanes More bike lanes Smoother bike lanes Off road bike paths
		Safe bike crossings	
		More bike friendly streets	
		Better biking safety	
	Bike theft prevention	safer bike parking near retail stores	
		Unspecified	
		More bike racks in front of businesses	

		More bike lock locations	
		Better bike parking	
		More bike parking in shopping districts.	
	More biking options	More pump stations	
		More bike share locations	
		More bike rental locations	
		Financial compensation paid by the city of Palo Alto to those who bike.	

### C) Private transit

The ideas in our third main category, private transit category, were further divided to three subcategories: Law enforcement, Reducing private transit, Personalized public transit.

These subcategories are elaborated in more detail in the following, and summarized in Table 3.

**Table 3. Subcategories in Private transit category.**

Subcategory 1	Subcategory 2	Subcategory 3
Private transit	Law enforcement	Enforcing laws on distracted drivers
		More tickets for motorists who talk on their cell phones while driving.
		More speeding tickets
		More law enforcement on dangerous drivers
	Reducing private transit	Telecommuting
		A Bay Area \$.25/gal tax on gasoline & diesel
		Tripling fuel prices
	Personalized private transit	Zip Cars with electric golf cars

		EV charging stations ubiquitous in Palo Alto and Silicon Valley
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**Law enforcement**

This category contains four main suggestions: Enforcing laws on distracted drivers, More tickets for motorists who talk on their cell phones while driving, More speeding tickets, More law enforcement on dangerous drivers.

**Reducing private driving**

This category contains three main ideas: Telecommuting, A Bay Area \$.25/gal tax on gasoline & diesel, Tripling fuel prices.

**Personalized private transit**

This category contains two suggestions: Zip Cars with electric golf cars, EV charging stations ubiquitous in Palo Alto and Silicon Valley.

**D) Big picture infrastructure**

The main category Big picture infrastructure was further divided to two subcategories: Road management, Regular advertising with the Utilities bill and newsletters about practicing safe driving, Completion of Charleston-Arastradero Plan and other bike boulevard projects . These subcategories are described in more detail in the following, and summarized in Table 4.

**Table 4. Subcategories in Big picture infrastructure category.**

Main Category	Subcategory I	Subcategory II
Big picture infrastructure	Road management	Roundabout instead of lights  Bumps and timed lights  Make Arastradero one lane in each direction with no widening to double lanes and then back again to reduce drivers aggressiveness  More signs to alert drivers to share the road  Buttons at traffic lights that actually do something - like stop the auto traffic to let bikes across  Fix Miranda/Foothill intersection by painting the road so that the curves suggesting a hard right turn onto Miranda

		are a whole lot more visible
	Regular advertising with the Utilities bill and newsletters about practicing safe driving	
	Completion of Charleston-Arastradero Plan and other bike boulevard projects	

**Road management**

This category contains 6 different ideas: Roundabout instead of lights, Bumps and timed lights, Making Arastradero one lane in each direction with no widening to double lanes and then back again to reduce drivers aggressiveness, More signs to alert drivers to share the road, Buttons at traffic lights that actually do something - like stop the auto traffic to let bikes across, Fix Miranda/Foothill intersection by painting the road so that the curves suggesting a hard right turn onto Miranda are a whole lot more visible.

**Regular advertising with the Utilities bill and newsletters about practicing safe driving**

**Completion of Charleston-Arastradero Plan and other bike boulevard projects**

**Section 3: Open City Hall Ideas Analysis**

The Open City Hall offers citizens another platform to share their ideas on the transportation issue. This virtual meeting offers an opportunity for citizens to share their vision, thoughts and solutions for the Palo Alto of tomorrow:

([http://www.cityofpaloalto.org/gov/topics/open\\_city\\_hall.asp#peak\\_democracy](http://www.cityofpaloalto.org/gov/topics/open_city_hall.asp#peak_democracy)).

Currently there are 29 respondents on Transportation Issue. We have analyzed 16 respondents' ideas so far and will update the analysis with the virtual conversation goes on during the year.

Using the same data organization method, we separate 16 idea clusters into 46 different ideas. We found that most ideas also fall into our 4 main categories and the related subcategories (see Table below).

Main Category	Subcategory I	Subcategory II
Public transit	Others	Public education on the benefits of public transportation Improving public transit along El Camino Cheap fares for in- town Caltrain rides Cheap fares
	Personalized public transit	Personal rapid transit
	Public shuttles	Shuttle modes
	Public transit modes	Increase frequency Expand geographical reach
Non-motor powered transit	Infrastructure	* Introduce High Speed Rail Underground Caltrain * Electrify Caltrain
		better bike infrastructure Bike corridors
		Improving biking safety Improve walkability
	More biking options	Secure and convenient bike parkings
Private transit	Others	* Encourage motorized bike
	Parking	Parking infrastructure No cars on train tracks
	Reducing private driving	Increase gas price few cars on the road
Big picture infrastructure	Improving traffic signals	Smarter coordinated traffic signals * More overpasses * Increase speed limits
	Road management	* Underground express lanes on major roads * Convert roads back to greenspace * Install red light cameras
		* Fewer lanes on residential neighborhoods
		* Walkable neighborhood * More variety of businesses locally
	* Others	* Mitigations on adverse impact on traffic when developing

Besides finding similarities between ideas in the Open City Hall and in the Summit, we also found some new ideas raised by respondents in the Open City Hall. For instance, in the forth main categories, Big picture infrastructure, the ideas with a star are new ideas not raised in Summit but raised in the Open City Hall. We see that in Open City Hall, a key trend in ideas is participants want a better infrastructure on the road and bike corridors.

We will keep you updated about the Transportation Idea Report, and offer Idea Report on Housing and Growth Management in August.

If there is any knowledge and skill we could contribute to your deliberation and evaluation, don't hesitate to contact us:

Tanja Aitamurto: [tanjaa@stanford.edu](mailto:tanjaa@stanford.edu)

Kaiping Chen: [kpchen23@stanford.edu](mailto:kpchen23@stanford.edu)