



# LOS ANGELES COUNTY

## SHARED MOBILITY ACTION PLAN



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SHARED-USE MOBILITY CENTER

# Shared Mobility Action Plan for Los Angeles County

SEPTEMBER 2016

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Over the last two years, the Shared-Use Mobility Center (SUMC) has had an unprecedented opportunity to serve as technical adviser to cities, transportation agencies, and business leaders in Los Angeles County on matters related to shared mobility. It is with great appreciation that SUMC plans to continue this work—including convening workshops, conducting research and providing technical support—to help realize the goals and strategies set forth in this plan.

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Shared-Use Mobility Center  
Chicago, IL  
312.448.6202  
Los Angeles, CA  
818-489-8651  
[www.sharedusemobilitycenter.org](http://www.sharedusemobilitycenter.org)

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Part 1

# Introduction

Los Angeles County is rapidly becoming one of the leading centers of transportation innovation in the U.S. and a testing ground for new mobility concepts. In recent years, several factors—including an influx of public and private sector investment, a quickly expanding public transit system and the introduction of new environmental sustainability initiatives—have fostered rapid growth in carsharing, bikesharing, ridesourcing, and other forms of shared mobility.

These shared modes of transportation have the ability to offer significant benefits to a region increasingly burdened by its reliance on the private automobile. A growing body of research confirms that public transit and shared mobility can together help lessen traffic congestion, reduce greenhouse gas emissions and lower household transportation costs. They are also changing the way people move, work and live their lives.

To fully realize the benefits of shared mobility—and to ensure those benefits reach all residents—it is critically important for local governments to establish goals and set policies to help shape the growth of this nascent industry. They must also take the lead in pursuing bold experiments and brokering partnerships to find new solutions that work best for their communities.

With so much change underway, Los Angeles County today finds itself at a critical inflection point. To help local leaders build on the momentum, realize emerging opportunities, and establish a vision for the region, the Shared-Use Mobility Center (SUMC) has created this Shared Mobility Action Plan for Los Angeles County. The plan draws on interviews with local stakeholders, findings from a series of regional shared mobility workshops, and original research to provide a roadmap that the county can follow to maximize the public benefits of shared mobility.

At the heart of the plan is a 2 percent vehicle reduction goal that would remove 100,000 private cars from the county's roads within the next five years by dramatically scaling up shared mobility in concert with public transit. Transit serves as a backbone that supports other forms of shared mobility, and its continued growth is essential to the success of these new modes. While the 2 percent goal may seem modest, SUMC believes its impact on the region can be transformative, and that it can help to chart a path forward to expand cost-effective and sustainable transportation options for all. However, it will require significant cross-jurisdictional cooperation, public-private collaboration, creativity, and hard work. It will also necessitate cultural change that alters prevailing attitudes about private vehicles and champions the social, environmental and economic benefits of shared transportation.

To realize this goal, the plan includes a series of recommended strategies, including:

1. Expand the Role and Reach of Transit
2. Drive Cultural Change to Support Transit & Shared Mobility
3. Emphasize and Expand Carsharing in All Communities
4. Leverage the Region's Bikesharing Momentum
5. Experiment in Ridesourcing, Microtransit & Vanpooling
6. Build out Mobility Hubs Countywide

Each of these strategies includes a variety of tactics, drawing on best practices from other cities and building on some of the industry's most innovative recent developments, including in ridesourcing, microtransit and carpooling.

The plan also features a summary of anticipated outcomes, calls for increased public and private investment to expand transit and shared mobility, and identifies specific policies and funding sources that local leaders can pursue to achieve this growth and create a robust, multimodal transportation system that works for all the region's residents.



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Part 2

# State of Shared Mobility in Los Angeles County



Few Angelenos likely realized that a vote cast during the November 2008 election would prove to be a major tipping point for the region. The passage of Measure R, a transportation ballot measure, provided increased funding for transit projects across all five of Los Angeles County's supervisorial districts, from the South Bay to the Antelope Valley. Powered by a half-cent sales tax increase, Measure R will ultimately result in the construction or expansion of a dozen rail lines, drastically changing the face of public transportation in the county.

At the same time, California's environmental legislative initiatives and aggressive local sustainability goals have increased the appetite for new solutions in the region related to curbing greenhouse gas emissions. Together, these developments have created a "perfect storm" of conditions that have allowed shared mobility – including bikesharing, carsharing and ridesourcing – to begin to flourish.

In the last few years, Los Angeles has grown from hosting one shared mobility provider (Zipcar) to nearly a dozen, including innovative homegrown start-ups such as HopSkipDrive, a transportation service that parents can use to book rides for their children. Many of the nation's leading shared mobility providers, such as Uber and Lyft, now have a major presence in the region.

The public sector, too, has played an active role in helping new, shared modes of transportation to grow. In 2015, the City of Los Angeles announced a first-of-its-kind pilot project to bring electric carsharing to low-income communities in the city's urban core, which was made possible by the Charge Ahead California Initiative (Senate Bill 1275). More recently, the Los Angeles County Metropolitan Transportation Authority (Metro) launched one of the first transit agency-operated bikesharing systems in the nation, installing approximately 1,000 bikes and 65 stations throughout downtown Los Angeles. Other cities in the region, such as Santa Monica, Long Beach, and West Hollywood, have also debuted bikeshare systems in the last year, with more than 1,000 bikes between them.

Despite this progress, however, Los Angeles County still faces pressing issues related to traffic congestion, air quality and equitable access to transportation. Even in the most dense, transit-accessible neighborhoods of the county, the majority of trips are still made in single-occupancy vehicles. Overcoming barriers to adequate, affordable transportation is also directly related to improving public health, access to jobs, and economic opportunity for residents countywide.

The good news is that the transportation revolution has begun. Now it is up to leaders across the county's 88 cities—including in local governments, transit agencies, businesses, nonprofits, and academic institutions—to work together to realize the promise of a greener, more affordable, and more accessible Los Angeles County.

## Shared-Use Mobility Center’s Role in Los Angeles

Established in 2014, the Shared-Use Mobility Center (SUMC) is a national public-interest organization working to foster collaboration in shared mobility and expand its benefits for all. SUMC’s work in Los Angeles began in early 2015 when it partnered with several organizations—including TransitCenter, Move LA and the Natural Resources Defense Council (NRDC)—to conduct Live.Ride.Share, the first regional conference on shared mobility in Los Angeles.

### SUMC in LA

SUMC worked with the City of Los Angeles to design and secure funding for an electric carsharing pilot project focused on serving disadvantaged communities.

Later that year, SUMC worked with the City of Los Angeles to design and secure funding for an electric carsharing pilot project focused on serving disadvantaged communities. This project draws on a unique public-private partnership and will reach an estimated 7,000 households in Central LA.

More recently, SUMC offered technical guidance to the Los Angeles Department of Transportation (LADOT) and Los Angeles County Metropolitan Transportation Authority (Metro) as these agencies work to implement the region’s long-planned Integrated Mobility Hubs (IMH) project.

Supported by \$8.3 million in federal funding, the IMH concept, like the EV carshare pilot, represents a sizeable start toward a larger vision for how shared modes can co-locate with and complement the county’s public transit infrastructure.

To build on these and other transportation developments taking place, TransitCenter and the William and Flora Hewlett Foundation also engaged SUMC to conduct a series of workshops and meetings in the region focused on finding ways to make the transit system more effective by linking it with new and emerging forms of shared mobility, as well as determining how the county can expand these new options to provide affordable and environmentally sound transportation options for all.

SUMC drew on these efforts, along with additional meetings with key public and private stakeholders and local community leaders, to inform the Shared Mobility Action Plan for Los Angeles County. The plan also builds off the strategic planning efforts of many regional organizations—including the Southern California Association of Governments (SCAG), Metro, LADOT, the City of Los Angeles’ Mayor’s Office, and local community-based organizations—whose efforts are crucial to improving the way that Angelenos live, work, and move throughout the county each day. SUMC plans to continue conducting workshops,



convening meetings and providing technical assistance to help Los Angeles County realize the objectives outlined in this plan.

## Shared Mobility Snapshot by Mode

This section provides a brief overview of how the various forms of shared mobility currently present in Los Angeles County—including public transit, carsharing, bikesharing, ridesourcing/ride-splitting, vanpools, shuttles, and microtransit—are helping to supplement the county’s growing public transportation system by filling gaps in service and addressing first/last mile challenges.



### Public Transit

Public transit—which includes buses, trains, streetcars, and shuttles—serves as a backbone that helps to support other forms of shared mobility. Transit’s continued growth is essential to the success of these new modes and, together, they can provide shared, cost-effective transportation options to residents.

The expansion of the Metro system, and Metro Rail in particular, has been a catalyst that has led to the growth of shared mobility and encouraged more sustainable land uses — such as transit-oriented development — that prioritize walkability and help to encourage healthier, more active lifestyles. When these new lines are completed, transit use will likely increase in Los Angeles County as fast, frequent transit service becomes available to a much larger number of Angelenos. Shared mobility can spur additional growth as bikesharing, ridesourcing and other shared modes help to extend the reach of every transit stop.



Notable transit projects in the region include:

- The Red, Purple, and Blue Lines, built in the 1990s, serve as the backdrop for much of the region's current carsharing and bikesharing infrastructure and provide promising opportunities for future expansion.
- The recently expanded Expo and Gold Lines offer opportunities for transit-oriented development and co-location of shared modes as these services continue to grow in the coming years.
- New extensions under way, such as the Crenshaw line, will be critical to ensuring that more transportation options reach a wide range of communities within the county.
- Small-scale demonstration projects – such as the Willowbrook Circulator at Rancho Los Amigos National Rehabilitation Center, which helps patients and families of all ages to access critical medical services – are essential to meeting the unique needs of specific demographic pockets of the county.

Improvements, such as bus shelters, better pedestrian access to stops, frequent service, and improved routing will also be essential to transit's success.



## **Carsharing**

Carsharing provides members with access to a vehicle for short-term use. Carsharing comes in a variety of forms, including traditional “round-trip,” one-way, and peer-to-peer carsharing. Because research suggests carsharing can contribute significantly to reducing reliance on private autos, with each carshare car removing 9 to 11 private vehicles from the road, this plan includes several proposed tactics designed to facilitate expansion of this mode. While carsharing is growing in Los Angeles County, it has a limited presence in the region relative to other large metropolitan areas. Current operators include:

- Zipcar: With more than 350 vehicles located in and around Los Angeles, Zipcar provides the majority of carshare service in the region. Zipcar, which originally launched as Flexcar, has been operating in Los Angeles County for over a decade and has shown steady growth in recent years. In 2016, Zipcar began offering its one-way carsharing service in LA, which will likely help the company further expand its presence.
- Car2go: Leading one-way carsharing provider car2go served the South Bay cities during 2014 and 2015, with cars available on a per-minute basis, before ultimately suspending operations in Los Angeles County. Car2go has since expressed an interest in serving the cities of LA and Long Beach, but will likely require changes to local parking policies prior to a re-launch.



- **WaiveCar:** A Santa Monica-based startup sponsored by Oscar Health Insurance Corp., WaiveCar was launched in 2015. The company is the first to use advertising revenue as part of its business model and puts its cars to work as “mobile billboards” while offering free two-hour rentals to drivers.



## **Bikesharing**

Tech-enabled public bikesharing, which features real-time information and uses mobile technology to assist with locking/unlocking and rebalancing bikes, is growing rapidly in the United States and around the world. Bikesharing systems come in a variety of forms, including dock-based systems; dockless GPS-based (or “flexible”) systems; low-cost, tech-light systems; and peer-to-peer bikesharing.

In 2016, Los Angeles launched one of the first transit-agency operated bikesharing systems in the nation. Administered by Metro, the Metro Bike Share system debuted in July 2016 in downtown LA, with plans to build out 65 stations and 1,000 bikes in the first year. The system, which features BCycle equipment and is operated by Bicycle Transit Systems, will ultimately expand to a network of 3,800 bikes across Los Angeles and Pasadena. Metro is actively promoting the system in other parts of the county as well, such as among the east side cities along the Gold Line.

A number of other cities in Los Angeles County have also launched bikesharing systems of their own within the past year all using the flexible Social Bicycles system, including:

- **Santa Monica:** Launched in November 2015 with 500 bikes and 65 stations





- **Long Beach:** Launched in March 2016 with 100 bikes and 10 stations; planned expansion to 500 bikes
- **Beverly Hills:** Launched in April 2016 with 50 bikes and 10 stations
- **West Hollywood:** Launched in August 2016 with 150 bikes and 17 stations

The University of California Los Angeles (UCLA) is also exploring its own bikesharing pilot in partnership with its neighboring west side cities, and Pasadena will be the next city to join Metro’s system. In addition, LADOT has worked with the City of Santa Monica to establish a cross-jurisdictional partnership that will allow for the expansion and use of Santa Monica’s network in neighboring Venice Beach.

While the growth of bikesharing systems in the region is a positive development, it is important to note that many of these cities have chosen to partner with different vendors that use a variety of technologies and business models. Over the next five years, addressing interoperability of vendors and payments systems between jurisdictions—along with building out local bike infrastructure and adopting other supportive policies—will be key to ensuring the success of bikesharing on the county level. This plan includes proposed strategies to bring these systems up to the scale achieved by other major cities so that bikesharing can serve the large footprint of Los Angeles County and effectively contribute to the goals of this plan.



### **Ridesourcing, Ride-Splitting & Taxis**

Ridesourcing providers such as Lyft and Uber, which are codified in California state law as Transportation Network Companies (TNCs), use online platforms to connect passengers



with drivers who operate personal, non-commercial vehicles. Ridesourcing has become perhaps the most ubiquitous form of shared mobility, and Los Angeles County is one of the largest regional markets in the United States for both Uber and Lyft. Additionally, these companies have expanded their offerings in LA to include UberPool and Lyft Line, which combine multiple riders in a single trip. These products are referred to as “ride-splitting”—since the passengers split both the trip and its cost—and have a greater potential to help reduce vehicle miles traveled (VMT) and generate cost savings compared with standard ridesourcing trips.

Transit agencies within Los Angeles County are also exploring pilots and non-exclusive partnerships with TNCs as a first/last mile solution to help riders travel to or from public transit. For example, Metro partnered with Uber on a two-week marketing campaign to provide discounted first/last mile rides during the opening of the Expo line. Other transit agencies across the nation have explored similar models, and in some cases have even begun subsidizing first/last mile ridesourcing trips. These types of partnerships will likely increase in the months and years ahead, and ride-splitting services in particular offer enormous potential to help fill gaps and provide first/last mile service for residents.

Los Angeles, like many large urban regions, has maintained local authority over the taxi industry, most notably through the Los Angeles Taxicab Commission. However, taxi drivers must be permitted by each municipality on a city-by-city basis, while TNCs are regulated centrally by the California Public Utilities Commission. As California considers strategies to put TNCs and taxis on an “even playing field” through statewide regulation, several of the taxi industry’s legacy consumer and safety provisions— such as mandates to provide wheelchair-accessible vehicles and serve low-income neighborhoods—hang in the balance. As TNCs continue their rapid growth, the City of Los Angeles is well positioned to continue to innovate in this policy arena in a way that “lifts all boats”.

**These types of partnerships will likely increase in the months and years ahead, and ride-splitting services in particular offer enormous potential to help fill gaps and provide first/last mile service for residents.**



### **Vanpooling**

Vanpooling programs—the majority of which are operated by public transit agencies with funding from the Federal Transportation Administration (FTA)—allow groups of commuters



(often co-workers) to share their ride to work. Vanpooling is an important part of the public transportation system in Los Angeles County, with more than 3,000 vanpools running throughout Greater Los Angeles. The largest vanpool operators in the region include Metro, Los Angeles County, and UCLA. Leading vendors include CalVans and Enterprise (which also recently acquired vRide, another operator). Metro leads a regional working group that brings together LA County and adjacent counties to identify and share best practices with employers and emerging technology. A vanpool coordinator for Los Angeles County employers is also stationed at the County.

As the cost of real estate continues to rise, more residents will likely be pushed out of the county's urban areas. As a result, major employers will likely experience an increased demand for vanpooling or similar services over the coming years. One new company working to capitalize on this trend is Green Commuter, which is developing a hybrid vanpool and carpool service using Tesla Model X vehicles. The company is planning to pilot a similar service in Chattanooga, TN and is expected to launch later this year in Los Angeles County.



### ***Shuttles***

Traditional shuttle services include corporate, regional, and local shuttles that make limited stops, often only picking up the employees of specific companies. The extension of Los Angeles' rail system—including the expansion of the Expo line, which is projected to serve tens of thousands of west side service sector employees—is likely to drive up services as more commuters seek first/last mile connections to transit. Over the next five years, colleges, hospitals, and business parks will be the most likely to adopt or increase the use of shuttle services.



### ***Microtransit***

In recent years, new tech-enabled private shuttle services have emerged to serve passengers using dynamically generated routes. Because they provide transit-like service, but on a smaller, more flexible scale, these new services have been referred to as “microtransit.” In general, they tend to draw customers who are willing to pay somewhat more for greater comfort and service, though in some cities the services are integrated directly into transit agencies' operations and fare collection systems. While no microtransit providers currently operate in Los Angeles County, they are likely on the horizon as this model gains traction nationwide.

All of the above modes provide first/last mile solutions that can help to expand the reach of Los Angeles County's transit system. The plan includes supportive policies and ideas for growing these modes in conjunction with the larger shared mobility ecosystem.

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**Public transit serves as a backbone that helps to support other forms of shared mobility. Transit's continued growth is essential to the success of these new modes.**

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Part 3

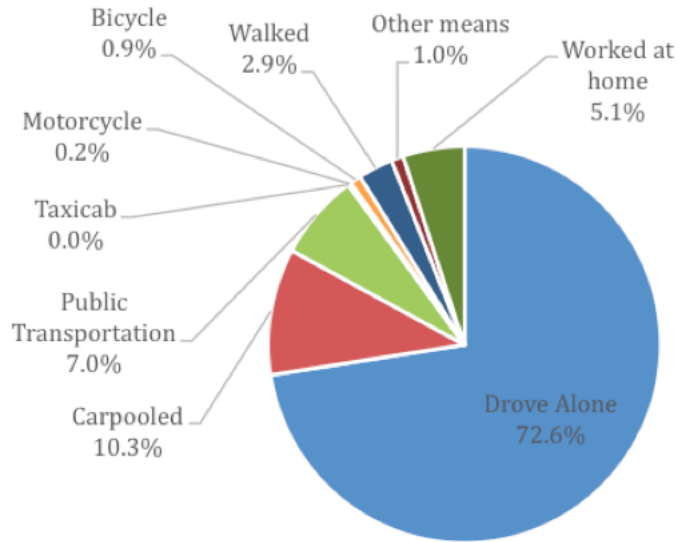
# Vehicle Reduction Targets



Reducing personal vehicle use and ownership is critical to cutting congestion, lessening greenhouse gas emissions and improving quality of life for Los Angeles County residents. Today, the majority of Angelenos drive alone, with nearly three-quarters of residents reporting they commute to work unaccompanied each day.

To create a more sustainable, affordable and environmentally friendly transportation ecosystem in Los Angeles County, this plan recommends the region pursue a 2 percent vehicle reduction goal, which will remove approximately 100,000 private cars from the road within the next five years and result in more than one billion fewer miles traveled. While this may seem like a relatively modest goal, SUMC believes it has the potential to be transformative and to accelerate further change.

**Figure 1:**  
**Current Los Angeles County Commute Mode Split**



As shown in the following tables, the county can achieve this vehicle reduction target—and realize significant associated benefits—by increasing transit ridership and aggressively growing shared mobility services. As a result of these improvements, the county could cut CO2 emissions by nearly 375,000 metric tons, reduce gasoline consumption by more than 40 million gallons, and save more than \$350 million in household transportation costs, each year.

**Figure 2:**  
**Additional Shared Mobility Units Required to Achieve 2% Target Vehicle Reduction**

Mode	Additional Units/Users Required
Transit Riders	34,000 riders
Bikesharing Bikes	10,000 bikes
Carsharing Cars	8,400 cars
Ride-splitting/Carpool Riders	16,800 riders

**Figure 3: Los Angeles County 2% Target Vehicle Reduction Benefits**

Benefit	Quantity
Net Annual VMT Savings	1 Billion Miles
Reduction in Annual Gasoline Consumption	41 Million Gallons
Total Annual GHG Emissions	372,000 Metric Tons
Net Annual Household Transportation Savings	\$363 Million

## A Tale of Ten Cities

Realizing the 2 percent vehicle reduction goal will require significant effort on the part of Los Angeles County, and its largest cities must play a leading role in making change happen. Not only do these municipalities have an outsized ability to help set the agenda for the region, they also have more than half of the county’s cars and the majority of its transit infrastructure.

For purposes of illustration, SUMC has identified ten cities (listed on the following page) in Los Angeles County that, together, could help the region get more than halfway toward meeting the 2 percent goal. These cities were selected based on a number of factors, including total population size and density, level of existing transit service and potential to support shared mobility.

While these ten cities will certainly need to play a key role in changing the face of transportation in Los Angeles County, the majority of strategies and tactics outlined in this plan can be implemented in any of the county’s 88 municipalities.

The metrics in this section were generated using SUMC’s Shared Mobility Benefits Calculator, which uses a model that incorporates estimates for vehicle ownership from American Commuter Survey (ACS) 2009-2014 data on journey-to-work modes and current carshare and bikeshare vehicle locations as explanatory variables. The calculator tool can be found online at [calculator.sharedusemobilitycenter.org](http://calculator.sharedusemobilitycenter.org).

**Figure 4: Potential Vehicle Reduction by Percentage in 10 Key Cities** (combined, 10 cities)

Total Vehicles Owned	2% Reduction in Cars	2.5% Reduction in Cars	3% Reduction in Cars
3.12 Million	62,500	78,000	93,700



**Figure 5: Current Commute Mode Split for 10 Key Los Angeles County Cities**

	Population	Population +18	Total Vehicles	Total Commuters	Drove Alone	Car-pooled	Transit	Other	Work at home
Downey	113,082	84,582	66,134	51,263	81%	11%	3%	2%	3%
Glendale	195,380	159,067	115,432	88,022	75%	10%	4%	5%	6%
Inglewood	111,133	82,222	57,631	46,755	72%	12%	8%	4%	5%
Long Beach	468,594	354,221	263,352	209,232	73%	10%	7%	5%	5%
Los Angeles	3,862,210	3,004,153	2,070,084	1,775,323	67%	10%	11%	6%	6%
Palmdale/ Lancaster	314,902	218,030	173,460	109,988	79%	14%	2%	2%	4%
Pasadena	139,065	112,611	88,074	68,340	71%	8%	6%	9%	6%
Santa Clarita	179,030	132,807	119,770	83,174	77%	12%	3%	2%	6%
Santa Monica	91,619	78,863	64,318	49,663	70%	5%	4%	11%	10%
Torrance	147,181	116,433	105,105	69,264	83%	7%	2%	4%	5%
<b>Top 10 Total</b>	<b>5,622,196</b>	<b>4,342,989</b>	<b>3,123,360</b>	<b>2,551,024</b>					
<b>Top 10 as % of County</b>	<b>56%</b>	<b>57%</b>	<b>55%</b>	<b>58%</b>					
<b>LA County</b>	<b>9,974,203</b>	<b>7,626,603</b>	<b>5,664,860</b>	<b>4,434,574</b>	<b>73%</b>	<b>10%</b>	<b>7%</b>	<b>5%</b>	<b>5%</b>

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Part 4

# Strategies and Tactics: Making it Happen



Over the next five years, Los Angeles County’s ability to develop an ecosystem that supports multimodal travel will rely on meaningful shifts in culture, governance, and infrastructure use. Drawing on findings from regional workshops and summits, interviews with local stakeholders, regional plans and analysis from the Shared Mobility Toolkit, SUMC has identified the following strategies to help policymakers and local leaders drive and support that change. Each strategy also features a number of tactics grouped into three categories: policies, pilots & programs, and partnerships.

## Expand the Role and Reach of Transit

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Metro is projecting the system will attract 127,000 new riders by 2035 as a result of extensions to its Gold, Purple, and Expo lines (not considering fluctuations in bus ridership). Five years from now, however, that number will likely be closer to 20,000. To achieve the aggressive mode shift goals set forth in this plan, Los Angeles County needs to focus on land-use issues as well as transit improvements. For instance, the county should continue to prioritize expansion of bus and rail, as well as increasing the speed and frequency of key routes through measures such as bus rapid transit (BRT). New infrastructure like bus shelters and improved sidewalks—and enhancements that can help enable seamless transfers and improve rider experience and usability—are also important. Additionally, transit agencies should leverage shared mobility to help boost ridership gains and work directly with the private sector—taking advantage of new breakthroughs in areas such as real-time ride-booking and dynamic routing—to optimize resources and improve performance and efficiency, especially in lower-density areas that are often difficult to serve effectively with fixed-route transit.



### Policies

- **Integrate the Transit Access Pass (TAP) fare system with other modes to create seamless integration across all platforms.** Providing a seamless payment option that riders can use across multiple modes, such as carsharing and bikesharing as well as transit, will help encourage multimodal travel and increased use of public transportation. Metro should continue to lead on integrating payment methods, building on its early success in using TAP cards to provide access to bikeshare bikes for monthly and annual members, and strive to expand TAP to include carshare, bikeshare and ride-splitting by 2018. All new shared-use systems should be built with TAP integrated from the outset.
- **Expand Transportation Demand Management (TDM) requirements and incentives to include shared mobility.** Employer TDM programs seek to reduce VMT by encouraging individuals to modify their travel behavior. Shared mobility networks can be a strong TDM tool when they have transit use as

their backbone. A variety of TDM strategies have existed in Los Angeles for years, and the City of Los Angeles is just now moving to revise its TDM policies enacted in 1993. These forthcoming revisions provide an opportunity to:

- *Take a regional approach to coordinate TDM initiatives and promote increased awareness of regional rideshare and ride-matching programs.*
- *Consider best practices both within California (e.g. Santa Monica, San Francisco) and outside of the state (e.g. Washington state, Arlington, VA).*
- *Provide significant promotional incentives to pair carshare and bikeshare with transit, particularly in areas with new rail lines, rapid/express bus routes and pilot programs.*
- **Continue to expand the “menu” of modes available to transit riders.** When Metro moved to lead Metro Bike Share, the agency took a bold step into the realm of shared mobility. The agency should continue to engage directly with other shared modes such as microtransit, ridesourcing, and carsharing. For instance, the agency could:
  - *Build on its first/last mile pilots around the Expo Line in 2016 to involve more significant partnerships with a range of providers through the Office of Extraordinary Innovation.*
  - *House budding pilot projects for carsharing in tandem with transit agencies of cities such as Pasadena and Long Beach.*
  - *Track and share information on riders’ tech preferences with other agencies and with private operators to help improve the rider experience.*



## Pilots & Programs

- **Focus transit-led pilots on underserved markets.** The public transportation sector has been widely supportive of the promise that shared mobility holds to improve transportation options for the most marginalized riders. This can form much of the focus as Metro’s Office of Extraordinary Innovation and smaller agencies like Foothill Transit work to design and launch new pilot projects. Such projects could include:
  - *Partnering with shared mobility operators to address late-night service needs and third-shift commute patterns. Similarly, low-ridership bus routes should be examined to provide flexible alternatives.*
  - *Expanding on paratransit service for persons with disabilities using shared mobility. A number of transit agencies are exploring this concept, which must also be approached cautiously and with an understanding that new services must operate within the bounds of ADA requirements.*



## Partnerships

- **Share data in real time across agencies and between modes to improve trip planning.** With 26 transit agencies currently using the TAP pass, making data easy to access, transfer, and understand is central to improving trip planning in the region. The region's agencies should work together—and, to the best of their ability, with the private sector—to establish and improve standard data-sharing practices.
- **Expand carshare and bikeshare pilots beyond city limits with Metro's help.** As carshare and bikeshare programs expand, local governments should enlist Metro's assistance in working with neighbor cities on shared mobility investments. The City of Glendale, for example, can coordinate between Metro and Metrolink to help create a seamless transfer experience for commuters seeking shared mobility options.
- **Launch mobility options for suburban areas of the county at key transit hubs.** Lack of access to transportation can represent a significant barrier to economic opportunity, and this is especially true for residents of areas such as the San Fernando Valley, South Bay, and Southeast Cities. Since key transit hubs – although limited – exist in these regions, they should form the focus for concentrated public investment in shared mobility programs. Local organizations should also collaborate to find new ways to increase access to transit and shared mobility.





# Drive Cultural Change to Support Transit & Shared Mobility

Encouraging Angelenos to adopt car-free and car-light lifestyles will require a multi-pronged approach. While expanding shared modes such as transit, carsharing and bikesharing are crucial to this effort, Los Angeles County must also proactively work to change the prevailing perception of vehicle ownership and shift the region's cultural paradigm when it comes to transportation.

Public transit and shared mobility will likely find success if they can provide convenience and cost savings. However, building a culture that embraces active transportation is also vital. Some cities have a long history of transit use, and their residents accept it as part of daily living. In Los Angeles, this culture must be largely be built through a focused and creative effort. To succeed, such an effort must encompass a number of strategies, including:

- Investing in public-facing marketing campaigns across multiple systems, leveraging private resources to support outreach, and employing new technology to reach a wide array of communities.
- Supporting internal culture change at local government agencies that promotes innovation and new ideas. The creation of the new Office of Extraordinary Innovation, for instance, is a great start in this direction.
- Encouraging a shift in thinking around resource allocation and funding expansion of shared modes as a component of transportation infrastructure.
- Developing marketing campaigns that promote the positive benefits of using transit and shared mobility, such as reduced stress, increased physical activity and greater cost savings.



## Policies

- **Apply public transit's focus on equity and accessibility to shared mobility.** Los Angeles County should do all it can to ensure that the benefits of shared mobility are available across the region. Such an effort could include:
  - *Putting transit riders at the center of planning for shared mobility expansion by ensuring that programs accommodate users with limited access to banking and technology options and those with language barriers. Every effort should be made to ensure that shared mobility systems have provisions for the use of debit cards and allow for access to services through "brick-and-mortar" locations that supplement smartphone-based information and payment.*
  - *Working closely with Access Services, the Consolidated Transportation Services Agency (CTSA) for Los Angeles County, to identify and test how shared mobility can meet ADA requirements and improve the rider experience.*

- *Collaborating with community-based organizations to prioritize geographic needs as both carsharing and bikesharing expand countywide.*
- *Partnering with mobility providers to share information on workforce development impacts as these rapidly growing companies provide more opportunities for local residents. Uber and Lyft in particular should work with the public sector in Los Angeles County to evaluate the job creating potential of their services.*
- **Embrace land-use policies that encourage multi-modal trips.** Transit and shared mobility tend to work best in pedestrian-friendly, walkable neighborhoods. Cities in Los Angeles County should pursue land-use strategies that encourage multi-modal trips and limit car usage, and tie these strategies to evolving TDM measures. Although land-use change is a long-term proposition, grant opportunities such as the Affordable Housing and Sustainable Communities Program can help support associated investments in shared mobility within the first three years of funded projects.
- **Encourage smaller cities to adopt interoperable shared mobility systems.** The largest cities in the region—the City of Los Angeles and the City of Long Beach—should work with Los Angeles County’s smaller municipalities to encourage the adoption of bikesharing systems that can interface with larger existing systems. This may require increased flexibility in pilot programs to allow for a diversity of vendors while also maintaining interoperability between systems.



## Pilots & Programs

- **Conduct well-staffed marketing and outreach campaigns in parallel with program launches.** To be successful, adoption rates for transit and new shared mobility services must grow rapidly following their launch. Los Angeles County should prioritize adequate marketing resources to drive this adoption. For instance:
  - *Municipalities and transit agencies should allocate at least 15 percent of system expansion funds to outreach and marketing efforts.*
  - *Community-based organizations should be asked to help with outreach in targeted neighborhoods where new pilot projects launch to ensure that communication is both effective and relevant. This engagement strategy will also build trust and cultural competency given the county’s diverse population and communities.*
- **Establish a working group on autonomous vehicles.** As in many regions, self-driving vehicles are likely to drastically change the transportation landscape

in Los Angeles County. The region's cities should join forces to discuss how to prioritize transit and shared mobility within a policy framework for autonomous vehicles. Findings from initial research on this topic in "Mobility in the Digital Age" (coordinated by the City of Los Angeles in partnership with the Goldhirsh Foundation) could be a starting point for the working group.

- **Incorporate shared mobility into student transit passes.** Low- or no-cost student transit passes are becoming increasingly popular in Los Angeles County. Agencies should also consider integrating bikesharing, ridesourcing and other shared modes into passes to help foster multimodal habits among the next generation of county residents. Additionally, they should look for opportunities to provide discounted bulk transit passes to major employers, government agencies and other large organizations.
- **Invest in and augment shared mobility staff at public agencies.** While the City of Los Angeles and Metro already have dedicated staff working on shared mobility, to truly drive change a larger cohort is needed. These and other agencies should plan to invest significant resources in hiring staff over the next five years who can champion shared mobility with the public good in mind. Additionally, as shared mobility funding opportunities become increasingly available, having staff that can draft proposals will help agencies remain competitive for funds. As part of this effort, city agencies should also look to:
  - *Increase awareness of shared mobility among agency staff. Publicizing shared mobility options in internal communications materials should be a relatively easy lift for local transit agencies. These agencies should also consider including shared mobility (particularly carshare and bikeshare membership) as part of their TDM programs.*
  - *Conduct training on transit integration with shared mobility for planners. City planning divisions and planning departments within transit agencies need to be engaged on shared mobility. Working with SUMC or other partners, agency staff could develop a standard training to demonstrate how to incorporate shared modes within the portfolios of planning department staff.*



## Partnerships

- **Coordinate a regional task force to explore new funding options.** Investing in Place, Move LA and other local mobility advocates should partner together to launch and support a regional task force to identify new options to fund shared



mobility. Local convening bodies such as LA Thrives, Fixing Angelenos Stuck in Traffic, NRDC, SCAG, and others could partner to identify state-specific funding opportunities, including the Affordable Housing and Sustainable Communities Program.

## Emphasize and Expand Carsharing in All Communities

Carsharing has tremendous potential to increase transportation access in Los Angeles County, especially for non-work trips. Of all the shared modes described here, it also has the greatest potential to reduce greenhouse gas emissions in concert with transit. While carsharing is growing in the area thanks to the emergence of new providers and pilot projects, a significant, coordinated effort will be needed to reach the goal of adding 8,400 carshare cars over the next five years. To help guide these efforts, the region should look to a range of best practices from cities like Seattle, Washington, DC, and San Francisco.



### Policies

- **Provide significant dedicated street space for carsharing.** On-street carshare parking increases visibility and encourages utilization of carsharing. Cities that have established aggressive on-street carshare parking pilots have seen significant returns. Seattle's successful 3,000 space on-street parking pilot, for instance, has resulted in more than 70,000 Seattle residents becoming one-way carsharing users. Specifically:
  - *Los Angeles County should strive to meet or exceed the benchmark set by Seattle. With a population five times that of Seattle's surrounding King County, this should be a reasonable short-term goal for the county. A study published in 2015 estimated that there are 3.6 million on-street parking spaces in Los Angeles County. Just 3,000 spaces reserved for carsharing would represent less than 0.1% of that total.*
  - *The cities of Los Angeles and Long Beach should lead in dedicating on-street parking for carshare. As these municipalities set policy, smaller cities are likely to follow suit. By providing dedicated, visible carshare parking, the county can send a clear message to operators that the region is open for business and is serious about carsharing.*
- **Incentivize carsharing in large residential developments.** Many cities have reduced minimum parking requirements for buildings that offer carsharing vehicles on site for their residents. Carsharing can enhance Transit Oriented Development (TOD) measures, providing another shared mode of transport

that complements public transit and allows residents to shed personal vehicles. Cities should provide clear code incentives for building developers and owners to reduce parking requirements (which will also allow them to save on construction and maintenance costs).

- **Standardize carsharing metrics reporting.** LADOT can take the lead to identify, communicate, and monitor metrics for evaluating the success of the city's electric vehicle carsharing pilot project. These metrics should be consistent with the metrics of the California Air Resources Board (CARB), and can offer a standard for measuring the social and environmental impacts of other carsharing systems, which will help maintain a strong case for a continued public role in these networks.



## Pilots & Programs

- **Expand current carsharing pilots.** The City of Los Angeles should work to secure significant continued investment from the Carsharing and Mobility Options program administered by CARB, with the goal of raising \$16 million in state investment over five years. Funds should be used to extend its low-income EV carsharing pilot project to adjacent neighborhoods in South and East Los Angeles, as well as in partnership with the county and cities such as Huntington Park. An extension of this pilot project would help to increase regional adoption of carsharing and utilization as a first/last mile solution along the Blue and Gold Lines. Additionally:
  - *Beyond expanding the City of LA program, other cities in the county should apply for CARB funding and explore opportunities to build on programs, such as the parking incentives currently being piloted in Pasadena and Santa Monica.*
  - *Metro should expand the park-and-ride pilot partnership with Zipcar to include other properties and fold the municipal (off-street) lots of other cities and agencies into the program.*
- **Continue leading the nation with carsharing in disadvantaged communities.** Significant transportation gaps still exist throughout Los Angeles County. Municipalities and regional agencies should continue working to find carsharing models that can best serve residents in these areas, and push existing models to continuously improve. Investments in electric vehicles for carsharing can also lead to improved public health outcomes.



- **Expand carsharing for use in local government fleets.** Municipalities and agencies should tap into the benefits of carsharing when it comes to their own vehicle fleets. Carsharing can help agencies reduce costs, improve efficiency and optimize vehicle use while providing an operational springboard for wider regional adoption of the services.



## Partnerships

- **Work to bring peer-to-peer (P2P) carsharing to Los Angeles.** Los Angeles County can create an environment in which P2P carshare can thrive. Building on income-based incentives available through CARB's various incentives for household EV purchases, car owners can share their vehicle with neighbors, providing an income stream while extending an affordable service in communities that may lack access to transportation.
- **Engage local and statewide advocates to grow public investments in carshare.** The Charge Ahead Coalition supports placing one million light, medium, and heavy-duty electric vehicles on California's roads over the next 10 years and has a strong support base within Los Angeles County. By tapping into this coalition and similar groups of advocates, local cities and transit agencies can pursue innovative approaches to integrate electric vehicles for all.



## Leverage the Region's Bikesharing Momentum

Metro Bike Share, which recently launched in downtown LA with approximately 1,000 bikes and 65 stations, will ultimately grow to 3,800 bikes located throughout the cities of Los Angeles and Pasadena. Other area municipalities, such as Long Beach and Santa Monica, have also recently launched systems. To reach the plan's goal of hosting 10,000 bikeshare bikes, however, the county must take a coordinated approach to scaling the region's existing and planned systems.



### Policies

- **Return to program design to make bikesharing more accessible.** Local jurisdictions launching new systems should address social equity concerns early in the planning phase. They must also be comfortable making changes to system design in response to community feedback, and to continue an open dialogue throughout implementation and operation. Considerations include:
  - *Providing cash payment options for riders without access to credit cards or bank accounts is a good first step, but it is only one of many adjustments to consider.*
  - *System planners should be willing to consider making adjustments to pricing, rental terms, bike design, and other components.*
  - *Considering cultural and language barriers, as well as physical (and practical) barriers to accessible systems is important in early project stages.*
  - *Community-based organizations' participation in program development, led by the Los Angeles County Bicycle Coalition and Multicultural Communities for Mobility, should be expanded to strengthen programming.*
- **Establish and apply bikesharing metrics.** As Metro recently launched Metro Bike Share, the transit agency is well positioned to apply best practices from other regions and develop accountability standards. Metro can align with efforts to standardize reporting as led by the National Association of City Transportation Officials (NACTO) and the North American Bikeshare Association (NABSA). Efforts can include:
  - *Making data publicly available with a high degree of detail, which is becoming standard industry practice for publicly owned systems.*
  - *Encouraging the cities of Santa Monica, Long Beach, and Los Angeles to report metrics from their programs to cities that are in earlier stages of developing bikesharing systems.*



## Pilots & Programs

- **Build protected bike lanes to encourage bikeshare adoption.** Even the densest, most expansive bikeshare system is doomed to fail if casual users don't feel comfortable cycling on city streets. Los Angeles County should make it a priority to quickly build out separated bike lanes that connect to major job centers, entertainment districts and residential areas. Where possible, these investments should be made in advance of bikeshare expansion.
- **Locate bikesharing hubs at highly visible sites.** When possible, the City of Los Angeles and other municipalities should site bikeshare stations in highly visible and accessible locations.







## Partnerships

- **Coordinate bikeshare investments between jurisdictions.** Regions often suffer from disjointed bike lanes due to district boundaries. To address these disruptions, municipalities should consider agreements like the one between LADOT and Santa Monica, which offers a model of cross-jurisdictional cooperation. While this issue itself needs attention, it also speaks to the potential for conflict between different models of bikesharing, particularly on LA's west side. To help encourage a robust bikesharing network across the region, local stakeholders should also:

- *Establish a cross-county taskforce on bikeshare interoperability. The region's bikesharing momentum is laudable but also presents some challenges. The task force, which could include all municipalities with operating or planned bikeshare systems, would help to find ways these systems can expand in coordination with one another. Most immediately, west side stakeholders—including the City of LA, Metro, the City of West Hollywood and community-based organizations from Hollywood, Koreatown and the San Fernando Valley—could meet to proactively discuss ways to support the growth of bikesharing along the Red and Purple lines.*
- *Identify sponsorship opportunities to launch and expand bikesharing systems. Adjacent cities could work together to identify sponsors to help provide financial support for their bikesharing systems. For example, backing from online video subscription service Hulu helped the City of Santa Monica fund its system. Securing a title sponsor for Metro's system in the near term will also encourage other cities in the region to join the system.*

## Experiment in Ridesourcing, Microtransit & Vanpooling

Some of the most innovative recent developments in the shared mobility industry have taken place in ridesourcing, microtransit and carpooling and vanpooling. Ridesourcing providers Uber and Lyft count Los Angeles as among their busiest markets. Both also provide their ride-splitting services—Uber Pool and Lyft Line—in the region. Additionally, the county is home to the nation's largest vanpooling program. Los Angeles County can continue building on this momentum to add the more than 16,000 daily ride-splitting/carpool riders needed to reach the mode split goal outlined in this plan.



### Policies

- **Dedicate pick-up and drop-off zones for shuttles and ridesourcing services.** Cities in Los Angeles County can help manage use of street space by dedicating specific drop-off and pick-up points for ridesourcing services, shuttles, and microtransit providers. Municipalities should create short-term pilot programs to govern the use of curb space by operators, since ridesourcing and microtransit continue to evolve so rapidly.





## Pilots & Programs

- **Explore microtransit pilots to complement transit.** For instance, Metro and the City of Inglewood could partner to operate a microtransit-like dynamic shuttle service to help reduce traffic congestion around Inglewood’s new sports and entertainment complex. This could be a test case for expanding microtransit to other congested hot spots throughout the region. Metro and other area transit agencies should also consider developing pilots based on early lessons learned from Denver RTD’s Call-n-Ride/Flex Route program and the Santa Clara FLEX pilot.
- **Design pilots to address jobs access for the service sector.** LADOT could request proposals for a service designed specifically for riders that work in the service industry, which is often poorly served by transit both because of workers’ late-night schedules and the location of jobs. With Los Angeles hosting a record-breaking 45 million visitors in 2015 alone, the hospitality and tourism industry – and its nearly 500,000 employees – continue to play a vital role in the region’s economy.



## Partnerships

- **Keep Requests for Qualifications (RFQs) flexible.** In late 2015, Big Blue Bus issued a Request for Proposal (RFP) to identify operators to help provide a very specific Blue at Night late-night, demand-responsive service along the Expo Line in Santa Monica. However, the RFP received few applicants due to the narrow service model. By keeping requests flexible, and opting for RFQs instead of RFPs, agencies can help attract ideas from a wider array of providers. Metro’s new “request for unsolicited proposals,” coordinated through its Office for Extraordinary Innovation (OEI), can serve as a resource for other agencies when it comes to crafting flexible procurement models.
- **Encourage the growth and coordination of employee shuttles.** While local transit agencies are often in touch with large area employers and institutions—including universities, hospitals and business parks—regarding the operation of private shuttles on city streets, they should also look for additional opportunities to collaborate with private shuttle providers on first/last mile solutions at rail stations and high-traffic bus stops.
- **Leverage ridesourcing to support carpooling and vanpooling programs.** Transit agencies in Los Angeles County should work to integrate new ridesplitting options into the various subsidized vanpooling programs available to commuters. Both the public (vanpooling) and private

(ridesplitting) programs have an impetus to share useful data on these newly created transit trips: operators can unlock a new revenue source, and transit agencies can earn credit, and federal aid, for hard data on shared trips.

- **Pursue first/last mile partnerships.** Several agencies across the nation have begun brokering partnerships with ridesourcing and microtransit providers like Uber, Lyft and Bridj to provide subsidized first/last mile rides to transit stops within specified geographic zones. Metro should consider building on its initial partnerships to increase mobility options and support continued growth of transit ridership. The county should also explore other emerging products, such as the Uber Commute pilot and Lyft’s evolving Carpool feature, to see what new concepts might be a fit for the region.

## Build Out Mobility Hubs Countywide

To achieve the mode shift targets outlined in this plan, creating increased connectivity across shared modes is critical. New research conducted by SUMC shows that “supersharers”—people who use multiple forms of shared mobility across several trip types—shed more cars and save more on transportation costs than those who use transit alone. Bikes sharing, car sharing and other forms of shared mobility are much more effective at attracting riders—and reducing private vehicle trips—when they are tied together as part of a robust ecosystem of mobility choices.

Mobility hubs, which combine multiple modes into one location, are the physical manifestation of the “supersharer” concept. Where possible, mobility hubs also integrate fare and technology to enable seamless transfers. In 2010, Metro and other local stakeholders received \$8.3 million in Jobs Access Reverse Commute (JARC) funding to develop a series of mobility hubs in the region. Following are a set of tactics intended to support the county’s efforts as the project moves toward a 2017 launch.

The image shows a close-up, angled view of the Zipcar logo. The logo consists of the word "zipcar" in a white, lowercase, sans-serif font, set against a bright green background. A registered trademark symbol (®) is located at the bottom right of the word "car". The logo is mounted on a dark surface, possibly a vehicle or a sign, and the perspective is from a low angle looking up and to the right.





## Policies

- **Establish a definition for Integrated Mobility Hubs.** Setting a standard definition and establishing core principles for Integrated Mobility Hubs (IMH) will help planners effectively identify locations for and guide investment around mobility hubs in target communities. For example, using the guide recently released by the City of Los Angeles planning department, Metro Joint Development can incorporate mobility hub planning into the design process for new bus and rail stations.
- **Design bus and rail stations to encourage multimodal transfers.** As part of the transit planning process, Metro Joint Development should establish a mechanism to incorporate shared modes into station design and promote their use as first/last mile solutions for riders. Related plans that may serve as helpful templates include LA Metro's First/Last Mile Strategic Plan and Metro's successful program to include carshare parking at Park-and-Ride lots.



## Pilots & Programs

- **Plan long-term for mobility hubs countywide.** Metro should work with cities along fixed-route transit lines to identify opportunities and secure funding to build out select stations into mobility hubs. This exercise can build on the priority locations listed in both the initial IMH plan as well as Metro's First-Last Mile Strategic Plan.
- **Prioritize outreach to understand trip-making in areas where bus service overlaps.** On the city's west side where many transit service areas overlap,



public entities such as the Big Blue Bus, Culver City Transit, the City of Los Angeles, and Metro should consider working together to publicly encourage multi-modal trip planning and better inform riders and planners alike regarding trip needs and use cases at these locations.

- **Engage community members in placemaking meetings on mobility hubs.** Metro and others should conduct a series of outreach meetings once locations for mobility hubs are identified to build local support for the project. Additionally, participating cities should partner with community-based organization to ensure meetings are designed to capture meaningful and applicable information on local needs.
- **Implement universally accessible trip planning systems.** Complementing mobile apps with physical kiosks will offer riders multiple options for accessing the menu of transportation services available at mobility hubs, and ensure that agencies meet all ADA and Title VI requirements.



## Partnerships

- **Build on the launch of bikesharing and the forthcoming EV Carshare pilot.** The City of Long Beach and LADOT can build on the momentum from these new programs to bring increased attention and resources to the mobility hubs project. In particular, planners should consider opportunities to concentrate physical assets at Metro rail and BRT stations given the convergence of these three funding streams.





- **Expand and improve integrated fare payment and real-time information technology.** County stakeholders can work with the industry to test and improve this technology, which helps to facilitate multimodal transfers and is crucial to the mobility hub concept. The county should also take care to ensure this technology meshes with “low-tech” components—such as call centers, staffed kiosks, and improved signage and wayfinding—to ensure all residents are able to realize the benefits of the IMH project.
- **Broadly advertise and celebrate the Integrated Mobility Hub project.** Much like the Federal Highway Administration’s Smart Cities Challenge, the IMH project is unprecedented in size and scope, and should be marketed publicly when moving to RFP to ensure that there is robust participation from the private sector, and that Los Angeles gets big ideas and even bigger partnership commitments.

## **Roadmap for Action: Prioritizing Tactics & Implementation**

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While all the tactics outlined within this section are important and could generate meaningful change to help shift the transportation paradigm in Los Angeles County, some are more time-sensitive or of a higher priority than others. Additionally, some tactics are intended to build upon earlier efforts. To provide a roadmap to help local leaders prioritize their actions, the table on the following page groups tactics into three distinct time periods: 2016–2017; 2017–2019; and 2019–2021.



**Figure 6: Roadmap for Action**

Time Period	Policies	Pilots & Programs	Partnerships
2016-2017	Continue to expand the “menu” available to transit riders	Establish working group on autonomous vehicles	Share data in real-time across agencies
	Embrace land-use policies that encourage multimodal trips	Invest in and augment shared mobility staff in public agencies	Coordinate county wide on shared mobility funding opportunities
	Establish a detailed definition for Integrated Mobility Hubs	Expand current carsharing pilots	Expand carshare and bikeshare pilots beyond city limits
	Establish and apply bikeshare reporting standards countywide	Directly engage community members on the design of mobility hubs	Launch mobility options for suburban areas of the county at key transit hubs
	Apply public transit’s focus on equity and accessibility	Locate bikeshare at sites with optimal “spotlighting”	Develop regional sponsorship strategies for bike share
	Encourage smaller cities to adopt interoperable shared mobility systems	Prioritize outreach to understand tripmaking in areas where bus service overlaps	Coordinate bikeshare interoperability across jurisdictions
			Explore microtransit pilots around new ridership potential
2017-2019	Incentivize carsharing in large residential developments	Continue leading with carsharing in disadvantaged communities	Work to bring peer-to-peer carsharing to Los Angeles
	Dedicate space for on-street carsharing	Conduct well-staffed marketing and outreach campaigns as part of program launches	Align carshare and bikeshare pilots with mobility hub planning
	Dedicate pickup and drop-off zones for shuttles and ridesourcing	Focus transit-led pilots on underserved markets	Leverage ridesourcing to support carpooling and vanpooling
	Integrate shared mobility into the Transit Access Pass (TAP) fare system	Design pilots to address jobs access for the service sector	Expand and improve fare integration at mobility hubs
	Expand TDM requirements and incentives	Incorporate shared mobility into student transit passes	
2019-2021	Focus on program design for bikeshare accessibility	Plan long-term for mobility hubs countywide	Engage advocates to grow public carshare investments
	Design bus and rail stations for multi-modal transfers	Expand carsharing for local government fleets	
	Standardize carsharing metrics reporting	Build protected bike lanes to encourage bikeshare adoption	
		Implement universally accessible trip planning systems	



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Part 5

# Regional Projections for Shared Mobility Services



Beyond the strategies outlined in the previous section, significant increases in public and private investment for shared-use mobility services, along with accompanying policy changes, will be required to achieve the ambitious goals set forth in this plan. In total, SUMC estimates that public investment of \$50 to \$75 million is needed (including funding for the Integrated Mobility Hubs project) for Los Angeles County to reduce the number of private vehicles on its roads by 2 percent over the next five years. Cooperation and matching funds from the private sector will also be vital to this effort.

**Significant public and private investment will be needed for Los Angeles County to reduce the number of private vehicles on its roads by 2 percent over the next five years.**

Following is a snapshot of possible investments and policy changes on a mode-by-mode basis that Los Angeles County can pursue to reach the metrics outlined in the plan.

## Carsharing

**Goal: Add 8,400 carshare cars**

Additional investment in the City of Los Angeles' EV carsharing pilot can expand the project's geographic reach and help scale up carshare fleets and charging infrastructure throughout the region. Adding 2,000 additional EV carshare cars, at least half of which should be located within disadvantaged communities, would likely require at least \$16 million from continued CARB investments as part of the Charge Ahead initiative for EV Carsharing; \$8 to \$10 million from the region's power utilities; \$4 million in additional public sector funds; and infrastructure support from the Los Angeles Department of Water and Power. Expansion on this level will also require shared commitment from local EV carshare operators, and private investment that matches the public investment by two to four-fold. Additionally:

- A mini-grant program of at least \$5 million administered by LA Metro to encourage smaller cities within the county to provide seed funding for carshare programs could result in the addition of at least 400 vehicles in challenging markets.
- The introduction of peer-to-peer (P2P) carsharing, which could launch as a pilot project but eventually become established in the region, could add at least 1,000 additional carshare vehicles. For comparison, the Bay Area currently supports nearly 1,400 P2P vehicles, with more than 1,100 of those in the city of San Francisco.

- Blending ridesourcing and carsharing models, and implicit “fractional ownership” of vehicles, could add the equivalent of at least 1,500 carshare vehicles.
- Growth of existing and new carshare operators—including round-trip, one-way and peer-to-peer models as well as emerging hybrid models that can also leverage public investments in vanpooling—could add thousands of new vehicles by 2022.
- On-street parking incentives made available to multiple operators, including both one-way and round-trip carsharing, could yield a net impact of more than 3,000 additional carshare cars within the City of Los Angeles and the rest of the county. By comparison, the City of Seattle, which is significantly smaller than Los Angeles, currently provides 3,000 on-street parking spaces for carsharing.

## Bikesharing

**Goal: Add 10,000 bikeshare bikes**

Throughout the U.S., most major cities and regions have made significant capital investments to scale their bikeshare systems. SUMC estimates that Los Angeles County will need to secure at least \$23 million in public investment plus an additional \$10 to \$15 million in initial sponsorship matches to achieve a 10,000-bike regional system.

This \$23 million could be achieved through:

- Locking in the \$11 million currently being considered to fund the next phases of Metro’s bikeshare system in the cities of Los Angeles and Pasadena (3,800 bikes total). However, to achieve growth equivalent to the pace set by other major U.S. cities, the current seven-year Metro plan will likely need to be accelerated to four years. The county should also consider integrating funds from the mobility hubs project and other sources to achieve this aggressive target.
- Securing \$5 million in public funding from sources such as the Affordable Housing and Sustainable Communities Program, regionally significant economic development projects, and continued contributions from Metro’s ExpressLanes revenues to add 1,500 bikes within the five-year timeframe.
- Identifying approximately \$7 million in funding to support the expansion of flexible bikeshare networks in cities such as Santa Monica, Long Beach, and West Hollywood from 1,200 bikes currently to 4,700 bikes. As has been done in Venice Beach, these flexible networks will need to interface with existing dock-based systems so the county’s bikeshare network can expand as a whole.

Private investment—primarily through sponsorships, as well as support from operators based on projected revenues—will be needed to cover approximately 35% of capital costs of the 10,000-bike network.

## Ride-Splitting/Carpooling

Goal: Add 16,800 riders

Uber and Lyft together provide a significant number of trips in Los Angeles County each year, and a growing number of them are made using ride-splitting products. Local agencies can increase those numbers by experimenting with new pilots—such as those now used in Philadelphia, Pinellas County, Florida and Centennial, Colorado—that subsidize ridesourcing trips to and from public transit.

The region should also consider pursuing microtransit pilot projects, which could attract ridesourcing operators as well as more explicitly transit-focused providers. A variety of interesting pilots in cities ranging from Seattle to Kansas City have emerged while this plan was under development, which makes it difficult to determine the scope of such a project. Here are some hypothetical parameters:

- A \$4 to \$6 million public investment, which leverages an equivalent private investment in a 12-month pilot, could attract 8 to 12 million passenger trips (5,000 weekday trips) with a \$1-per-trip subsidy for the full year. Thus, the locations and hypothetical trip volume for a pilot would have to be very carefully considered, and applied in a “trial and error” fashion to several fine-tuned markets, such as:
  - Augmenting bus services along the Wilshire and Vermont Corridors, with key connections to the Blue and Purple Lines.
  - Providing connections to express bus and rail corridors, serving both first/last mile and reverse commute gaps for the San Fernando Valley and the Gateway and South Bay cities.



## Public Transit

Goal: Add 34,000 riders

The expansion of the county's public transit system is well underway as a result of Measure R. Projections suggest Metro will add 20,000 riders over the next five years from these and other projects, and the passage of Measure R2/Measure M could help to further bolster this growth.

To build on this momentum and reach the target suggested in this plan, the county should also prioritize expansion of bus and other flexible transit as well as focus on increasing the speed and frequency of key routes, such as through bus rapid transit (BRT) and the use of microtransit and other first/last mile solutions. Other changes that can help Los Angeles County reach the 2 percent vehicle reduction goal include:

- Travel Demand Management strategies
- Reduced fares and combined fare media
- Seamless transfers
- Real-time information
- More direct routing to key destinations
- Sustained marketing efforts to promote the cultural and health benefits of shared transportation

Better infrastructure, ranging from dedicated bus lanes to shelters and improved pedestrian access and signage, is also important

Additionally, the deployment of Integrated Mobility Hubs can help to attract new riders to the system. As mentioned previously, there is already funding for the City of Los Angeles and City of Long Beach to build out mobility hubs. Matching funding could also likely be raised for turning specific, strategic transfer points into mobility hubs that feature integrated apps, kiosks, and staffing in the form of ambassadors or guides. These funds could range from \$6 to \$10 million when accounting for support from cap and trade and Affordable Housing Sustainable Communities programming, which could also be used to fund subsidized transit passes.



To Union Station

Part 6

# Additional Public Funding Sources for Shared Mobility



Identifying and accessing funding is critical to expanding shared mobility in Los Angeles. In addition to the funding sources explored in the previous section, following are brief descriptions of several existing and potential funding sources—on the local, state and federal level—that transportation agencies, private operators and community partners can use to demonstrate the benefits of shared mobility, scale public investment in these systems, and broaden their impact.

## **Local Funding**

### ***Metro’s Call for Projects***

As part of the Los Angeles County Transportation Improvement Program, Metro regularly awards funds to regionally significant transportation projects. Some of these funds have, in the past, been allocated to projects that test shared mobility concepts. For example, a \$1.6 million first/last mile transit connectivity project funded in 2009 included several multimodal elements, such as bike parking, mobility hub wayfinding, information technology, and an on-demand shuttle. The program’s Call for Projects process runs every other year. Proposals are initially ranked by Metro staff before being sent to the Metro Technical Advisory Committee and Metro’s Board of Directors for approval. Traditionally, the funds are available once awarded although, in some cases, they must be reimbursed after three to five years.

*Several elements of this plan are strong candidates for inclusion in the 2017 and 2019 Call for Projects process.*

### ***Office of Extraordinary Innovation***

In 2015, Metro’s commitment to advancing public-private partnerships was enhanced by the creation of the Office of Extraordinary Innovation (OEI), which reports directly to the Office of the Chief Executive Officer. Tasked with encouraging and identifying public-private partnership opportunities in the region, the OEI issued a public-facing open bid policy—the first of its kind—in early 2016. Shared mobility partnerships are likely to emerge across many of the modes outlined in the previous section as part of this open bid process. Applications are accepted on a rolling basis.

*Shared-use mobility operators should approach Metro’s OEI with new concepts—especially in the areas of microtransit and ridesourcing—that can either fit into traditional public-private partnership structures or offer new or different business models.*



## ***ExpressLanes Revenue***

Metro collects ExpressLanes revenues from tolls on the 110 and 10 freeways. These revenues have become a valuable source of funding for transportation projects in the corridors where they operate. For instance, \$3.8 million of the funds for Metro's initial bikeshare pilot came from ExpressLanes revenues. These funds could also be leveraged for projects that connect shared modes to help ease traffic in corridors along or within three miles of the locations. For example, the newly established La Kretz Innovation Campus of the LA CleanTech Incubator (LACI) has partnered with LADOT and FAST to apply to build out multi-modal services in the Arts District to benefit local employers and residents alike. Submission for funds takes place annually.

*Shared-use mobility—and bikeshare in particular—could compete for a greater share of ExpressLanes funds in future Revenue Reinvestment Expenditure Plans.*

## ***2016 Transportation Ballot Measure***

In November 2016, Los Angeles County voters will head back to the polls as a follow-up to the transportation ballot Measure R passed in 2008. The plan, if approved, will allocate a total of \$120 billion in public transportation funding. The plan includes shared mobility as part of a set-aside for active transportation projects, which would receive \$2.5 billion or approximately 6 percent of the total funding, starting in 2018.

*Just 0.1% of this fund (\$120 million), or 5 percent of the active transportation set-aside, could seed regional bikeshare expansion to 20,000 bikes and support operating costs for a decade. The funds could also be used to support other types of shared mobility, especially those focused on providing first/last mile connections to transit.*



## State Funding

### ***California Air Resources Board's Cap and Trade Programming***

Cap and trade funds were developed as part of the state's 2012 effort to create a mechanism for meeting emissions goals through the use of a marketplace exchange. The program originally stems from efforts going back to the Global Warming Solutions Act of 2006. The funds are currently allocated to a number of initiatives, including Air Resources Board programming that serves disadvantaged communities identified through the CalEnviro screening tool. Cap and trade funds were used to support the City of Los Angeles' EV carsharing pilot, and it is possible that future funding cycles could be used to design and launch new shared mobility projects, as well as to help existing projects move from the pilot phase into full-scale deployment.

*LADOT will seek additional cap and trade funds to support the LAEV program, but there is potential for other shared mobility programs in Los Angeles County to tap into this funding stream.*

### ***Affordable Housing and Sustainable Communities***

State cap and trade monies also support the Affordable Housing and Sustainable Communities (AHSC) Program, which provides funding for projects that will reduce greenhouse gas emissions and benefit disadvantaged communities through increasing access to affordable housing, employment centers and key destinations via low-carbon transportation. The AHSC Program can offer an additional funding stream to support the growth of carshare, bikeshare, and potentially microtransit. Shared mobility applicants for the inaugural cycle of AHSC included Metro's bikeshare system (\$8 million), the Bay Area's



CarShare4All program (\$855,000), a rural vanpool program in the Central Valley for agricultural workers (\$3 million), and mobility hubs and corridor improvements in San Diego County (\$7 million) and the Tahoe region (\$8 million). While only a few of these applications were successful, the Strategic Growth Council, which administers this program, has been responsive to the need for including shared mobility as part of the larger transportation program. In this most recent cycle, total funding available exceeded \$300 million. In the second year of funding, projects were allowed up to \$500,000 each for transportation-related enhancements.

*LADOT, working with the City of LA's Housing Department, has taken a lead role in working to make a portion of these AHSC funds available for shared mobility on a coordinated, project-by-project basis. Over the next five years, 10 to 20 Affordable Housing projects could be leveraged to assist shared mobility expansion targeting disadvantaged communities.*

## **Federal Funding**

### ***USDOT TIGER Grants***

Since 2009, the U.S. Department of Transportation (USDOT) has funded more than \$4.6 billion in projects for capital investments in surface transportation infrastructure nationwide, allocating \$500 million in the 2016 round alone. A number of innovative projects relevant to the shared mobility space have been funded under the TIGER program, including the deployment of EV fast-charge stations along the I-5 corridor in Oregon, establishing multimodal mobility hubs in several cities, and making streetscape and bicycle/pedestrian improvements. The City of Seattle is the only municipality to date that has applied for TIGER funding to support shared mobility infrastructure, but this is clearly the start of a trend, as shared mobility has begun to demonstrate an impressive return on investment as well as the ability to attract significant private investments.

*LADOT is in a strong position to pull together current funding streams to submit a TIGER proposal in partnership with LA Metro that centers on shared mobility infrastructure.*

### ***FTA Mobility on Demand Sandbox***

Established in 2016 and currently funded at slightly over \$2 million, the FTA's MOD Sandbox program will fund demonstration projects that increase seamless integration across modes to bolster the effectiveness of transit. Sandbox projects will also have access to greater regulatory flexibility in order to explore innovative new mobility concepts. In 2016, LA Metro and Seattle's King County Metro submitted a joint application to the FTA's program.



*Metro, LADOT and others should look for additional opportunities to test concepts through future rounds of the FTA Sandbox program.*

## **U.S. DOT Congestion Mitigation and Air Quality Improvement program (CMAQ)**

Created under the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) and funded under the most recent federal transportation reauthorization for up to \$2.5 billion annually, the CMAQ program provides flexible funding to help state and local governments meet Clean Air Act requirements for current and former air-quality non-attainment areas. The Bay Area MTC's Climate Initiatives Program has funded a number of carsharing pilots and expansions, including programs that targeted underserved minority and/or low-income communities. These funds have also been used for carsharing, bikesharing and other shared mobility programs in several states.

*Los Angeles County can explore using CMAQ funds to expand the existing LA EV carshare pilot and other shared mobility pilots and systems.*

## **Multi-Jurisdictional Funding**

### ***Integrated Mobility Hubs (IMH)***

Funding from the federal Jobs Access Reverse Commute Program (JARC) is being used to initiate Integrated Mobility Hub capital investments and early operations within the City of Los Angeles and City of Long Beach to increase mobility options for low-income riders. To date, funding through this federal source has amounted to \$8.3 million for capital and operations and will incorporate the creation of physical and digital resources to assist riders with navigation of multimodal trips.

*The application used for JARC funds could be leveraged—both directly as a match, and more broadly as a model—for future federal, state, and local grant opportunities throughout the county.*

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Part 7

# Conclusion





Public transit and shared mobility have the potential to transform transportation in Los Angeles County. Together, they can create a comprehensive network of accessible, affordable and environmentally sustainable options that work for everyone.

While the region is currently experiencing a surge in momentum as the result of Measure R and new interest from private mobility providers, it will still take significant effort from the public sector—through enacting new policies, experimenting with pilot projects, and pursuing new partnerships with the private sector—to truly realize the promise of shared mobility and extend its many benefits for all the county’s residents.

Change will require individual leadership on a number of levels. The county will need mobility “champions” within local governments and transportation agencies, along with demonstrated support at the executive level. Community-based organizations, advocacy groups, nonprofits, and academic institutions will also need to play a leading role—especially when it comes to ensuring that concerns related to equity, affordability, and access stay at the forefront.

The private sector, too, must make a substantial financial investment in the region. And private operators must continue working in partnership with the public sector to advance innovation, and to invest the time and energy needed to scale up shared mobility across the county.

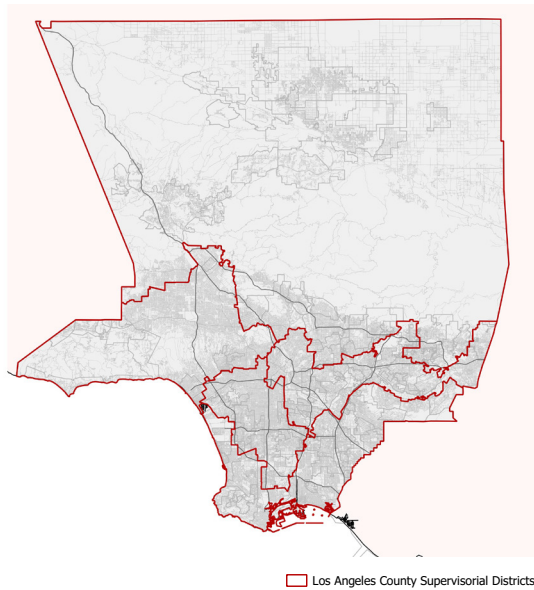
Finally, the success of shared mobility and this plan will require increased funding at the local, state, and federal levels. This investment is crucial to expanding and broadening the impact of new shared transportation options, and will be critical to preparing Los Angeles County for the future.



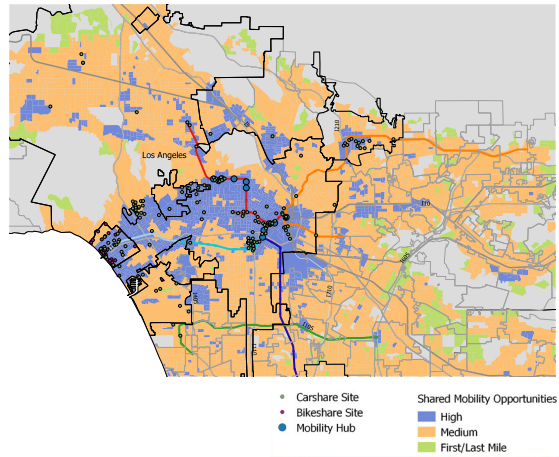
# Appendices

## Appendix 1: Maps of Los Angeles County

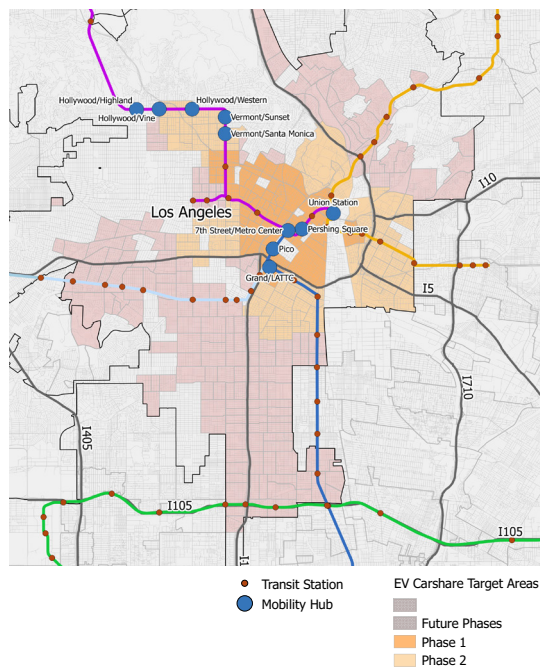
**Figure 7: District Boundaries**



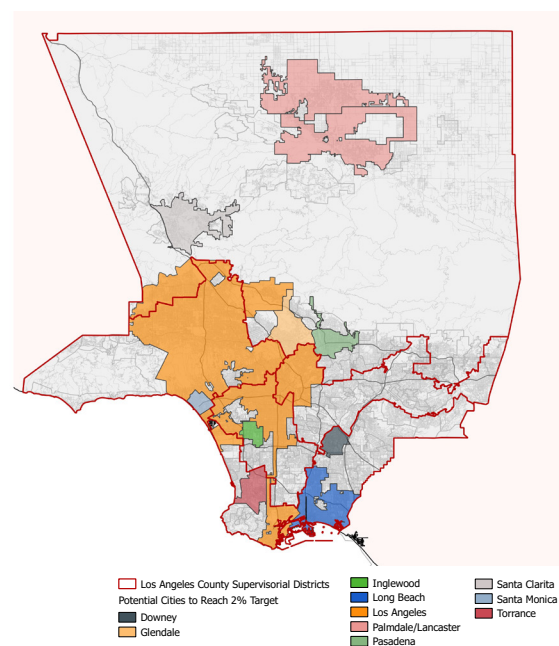
**Figure 8: Opportunity Analysis**



**Figure 9: LA/EV Pilot**



**Figure 10: Target Cities**





## **Appendix 2: Additional Resources**

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### ***SUMC Research***

- SUMC Shared-Use Mobility Reference Guide
- SUMC Shared Mobility Toolkit
- American Public Transportation Association Research Analysis: Shared Mobility and the Transformation of Public Transportation
- Transportation Research Board Transit Cooperative Research Project 188: Shared Mobility and the Transformation of Public Transportation

### ***TransitCenter Research***

- Who's On Board 2016 Report
- A People's History of Recent Urban Transportation Innovation

### ***Regional Strategic Plans***

- City of Los Angeles Mobility Plan 2035
- City of Los Angeles Department of Transportation Short-Term Transportation Plan
- City of Los Angeles Department of Transportation Strategic Plan
- City of Los Angeles Mobility Hubs, A Reader's Guide
- Metro Plan for November 2016 Ballot Measure
- Metro First Last Mile Plan
- Metro Long Range Transportation Plan
- Metro Sustainability Plan
- Southern California Association of Government Regional Transportation Plan

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**The Shared-Use Mobility Center (SUMC)** is a public-interest organization working to foster collaboration in shared mobility (including bikesharing, carsharing, ridesharing and more) and help connect the growing industry with transit agencies, cities and communities across the nation. Through piloting programs, conducting new research and providing advice and expertise to cities and regions, SUMC hopes to extend the benefits of shared mobility for all.



[www.sharedusemobilitycenter.org](http://www.sharedusemobilitycenter.org)