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CITY OF OAKLAND

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Date: April 26, 2018
To: City Council
From: Councilmember Kaplan
Re: A Resolution On The City Council's Own Motion Submitting To The Voters At The Statewide General Election On November 6, 2018, A Proposed Ordinance To Impose A General 50 Cent Per Ride Tax On Passengers Of Transportation Network Companies; And Directing The City Clerk To Take Any And All Actions Necessary Under Law To Prepare For And Conduct The November 6, 2018 Statewide General Election.

Dear Colleagues on Oakland City Council and Members of the Public,

In recent years, a growing number of jurisdictions have been grappling with the issue of rising vehicle traffic from trips provided by Transportation Network Companies (TNCs), which use the public infrastructure, including our streets. Maintaining our streets, sidewalks, and pedestrian crossings is costly, and important to the public, and the trips of TNCs contribute to traffic congestion, air pollution, and wear and tear on the public infrastructure.

Currently, TNC trips do not pay taxes to the city of Oakland. Other jurisdictions have begun to impose fees and/or taxes on the trips of TNCs. I have been encouraging Oakland to ensure tax fairness and adequate revenue for vital public needs, by working to make sure that we tax those goods/services that have not been paying taxes. The use of a "new technology," such as a smartphone app, to order a good or service, should not be a justification for tax evasion. It is unfair to other businesses who are paying taxes, and to the public who needs the services that tax revenue provides, if some categories of people doing business in our community do not pay taxes while others do.

Previously, we brought a successful proposal forward to begin collecting "Transient Occupancy" taxes for short-term residential rentals, and, in prior years, authored the nation's first tax on the gross receipts of cannabis facilities. In order to do this effectively, within California law, we are proposing a structure that does not regulate TNCs, but rather, only imposes a per-pickup tax, and to submit the proposed tax to the voters as a ballot measure in November 2018.

Now, with the growth of TNCs, and increasing public recognition of their impacts, and in the interest of tax fairness, we seek to provide a reasonable and easy-to-implement mechanism to provide a method to tax the trips of TNCs. Specifically, we propose a 50-cents per pickup charge on TNC trips originating within the City of Oakland, and authorize City Council to adopt by Ordinance reductions in the rate, such as for "pool" (multi-user) trips, low-income passengers, and late night rides.

By imposing a fee on TNC trips originating in our City, Oakland would be joining many jurisdictions that are already generating millions in revenue by imposing fees on and/or taxes on TNC trips. Recently, the City of Portland, Oregon, adopted a 50-cent per pickup charge, like the one being proposed here. Chicago officials calculated that TNCs cost the city about $40 million a year in lost revenue from transit fares, parking fees, licenses and permits - and now, the City of Chicago charges passengers a 65-cent fee per trip, and the TNCs an additional fee per trip. The TNC fees produced nearly $39 million for Chicago's general fund in 2016, according to city estimates, and 2017's revenue is expected to reach $72 million. The State of Massachusetts imposes a per-pickup charge on all TNC trips within the State; and in South Carolina, a 1 percent fee has yielded more than a million dollars for municipalities and counties to spend as they choose.

A 2017 study from the *University of California Davis, Institute of Transportation Studies*, stated, "Directionally, based on mode substitution and ride-hailing frequency of use data, we conclude that ride-hailing is currently likely to contribute to growth in vehicle miles traveled (VMT)." This means more pollution, less reliance on public transportation, more traffic congestion, and wear and tear on already-impacted streets.

A report by the *San Francisco County Transportation Authority*, states: "TNCs drive approximately 570,000 vehicle miles within San Francisco on a typical weekday. This accounts for 20% of all local daily vehicle miles traveled (VMT) and includes both in-service and out-of-service mileage."

A report by former NYCDOT staffer Bruce Schaller on TNC use in New York City stated that, "As a result of growing trip volumes, TNCs added 600 million miles of driving to city streets in 2016... The growth of on-demand ride services is also working to undercut the essential role of mass transit in absorbing growth in residents, workers and visitors."

This incredible impact on public infrastructure cannot be denied, and imposing taxes or fees on TNC trips means giving back to the jurisdictions that host the ride-sharing companies on their streets, roads, and highways.

If adopted, the City Council would have authority to amend or reduce the tax, but not to increase it. This would be a general tax.

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I am requesting that the City Council submit to the voters of the City, at the November 6, 2018 election, the ordinance and ballot measure set forth in this item. This ordinance proposes to adopt a tax of up to 50 cents per ride on passengers of Transportation Network Company trips originating in the City of Oakland, if a majority of all qualified voters voting on the ballot measure vote in favor thereof.

Thank you very much for your consideration,

Councilmember At-Large Rebecca Kaplan

Also, please see the following attachments:

1) Article on jurisdictions imposing taxes and fees on TNCs
https://www.nytimes.com/2018/02/18/nyregion/uber-lyft-public-transit-congestion-tax.html

2) UC Davis report: "Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States"
https://drive.google.com/open?id=1o860rLuAKuRDQ52R-yQqVH07Stvmxv5l

3) California Public Utilities Commission report: "Summary of Transportation Network Companies' Annual Reports 2014 and 2015 Submissions"
https://drive.google.com/open?id=1Ifw-Uzntvy6HCl94fRYu30i1rYDbGXUa

4) San Francisco County Transportation Authority report: "Emerging Mobility – TNCs Today Report"
http://www.sfcta.org/tncstoday

5) NYCDOT staffer Bruce Schaller report: "UNSUSTAINABLE? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City"
http://www.schallerconsult.com/rideservices/unsustainable.htm

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The New York Times | https://nyti.ms/2ByCULc

N.Y. / REGION

When Calling an Uber Can Pay Off for Cities and States

By WINNIE HU FEB. 18, 2018

In Chicago, a 15-cent fee on Uber, Lyft and other ride-hailing services is helping to pay for track, signal and electrical upgrades to make the city's trains run faster and smoother.

Ride-hailing trips in Philadelphia are expected to raise $2.6 million this year for the city's public schools through a 1.4 percent tax that will also generate more than a million dollars for enforcement and regulation of the ride-hailing industry itself. In South Carolina, a 1 percent ride-hailing fee has yielded more than a million dollars for municipalities and counties to spend as they choose.

And Massachusetts began collecting 20 cents for every ride-hailing trip this month, earmarking the revenue to improve roads and bridges, fill a state transportation fund and even help a rival — the struggling taxi industry — adapt with new technologies and job training.

As ride-hailing services become a dominant force across the country, they have increased congestion, threatened taxi industries and posed political and legal challenges for cities and states struggling to regulate the high-tech newcomers. But they are also proving to be an unexpected boon for municipalities that are increasingly latching onto their success — and being rewarded with millions in

revenue to pay not only for transportation and infrastructure needs, but also a host of programs and services that have nothing to do with the ride-hailing apps.

Now New York is seeking to join this growing wave with a new surcharge on ride-hailing and taxi trips that could become a central piece of an ambitious congestion pricing plan for Manhattan. A state task force has proposed fees of $2 to $5 per ride that would be among the highest in the nation — and could generate up to $605 million a year for the city's failing subway system.
"We used to have yellow cabs, we now have yellow cabs and black cars and green cars and every color in the rainbow and they cruise downtown Manhattan to pick up fares," Gov. Andrew M. Cuomo has said. "That is one of the first places I would look to reduce congestion and to raise money."

Even as President Trump promotes a plan to rebuild the country's tattered infrastructure, many local governments are not waiting to see what, if any, help Washington provides and are finding novel ways to pay for transportation and other public works projects.

Across the nation, more than a dozen states and municipalities have imposed fees or taxes on ride-hailing companies or their passengers, or sometimes both, and many more are considering such measures, according to transportation and tax experts. Advocates for the charges contend that the ride-hailing cars should pay for using public streets and resources, contributing to gridlock and pollution, and siphoning passengers and fares from public transit.

"If they want to share the pie, then they have to pay the price," said Fayez Khozindar, the executive director of the United Taxidrivers Community Council, an advocacy group for taxi drivers in Chicago. "It's fair because we know the city is short on funds and they want to fill the hole."

But some drivers and passengers for the ride-hailing companies say they have been unfairly singled out — in many places the new fees do not apply to taxis.

"Uber and Lyft have always been an easy target for cities looking for new streams of revenue," said Harry Campbell, a driver for Uber and Lyft in California who writes a popular blog, The Rideshare Guy.

In New York and Chicago, Uber and Lyft have said they see their services as complementing the public transit systems and providing another option for riders, especially in transit deserts with few bus routes and train lines. Uber supports a congestion plan for Manhattan — even running an ad campaign backing the idea — as long as it does not single out for-hire vehicles.

"A comprehensive congestion pricing plan that is applied to all vehicles in the central business district is the best way to fully fund mass transit, reduce congestion and improve transportation for outer borough New Yorkers," an Uber spokeswoman, Alix Anfang, said. "A surcharge alone will not accomplish these goals."

Last year, New York State approved a 4 percent assessment on ride-hailing trips that begin outside New York City (rides in the city are already subject to state and local taxes). It is expected to raise $24 million a year for the state's general fund though one state legislator, Senator John E. Brooks, a Democrat from Long Island, has proposed legislation to direct that revenue to local bus and commuter rail services. "We need to think creatively and outside of the box in order to improve funding for local transit," he said.

The new fees and taxes are often part of broader regulatory measures as states and localities scramble to update tax codes and laws that have not kept up with the proliferation of app-based ride services. For instance, a Georgia state tax applies to rides in taxis but not ride-hailing cars even though they essentially do the same thing, said Carl Davis, research director for the Institute on Taxation and Economic Policy in Washington.

"A lot of tax codes weren't set up to take them into account," Mr. Davis said. "They're so new they didn't even exist a decade ago. It's an emerging tax issue, and states and localities are playing catch up."

South Carolina added a 1 percent fee to ride-hailing trips in 2015, in part to establish a single regulatory framework and block local efforts to charge prohibitively high fees to keep them out, state officials said. Now that fee has become a source of extra cash. The city of North Charleston, for instance, receives more than $30,000 annually and uses it for municipal operations.

In Oregon, Portland officials initially barred Uber but eventually agreed to allow it and Lyft to operate through pilot programs. In 2016, the city sought to create a single standard for taxis and ride-hailing cars and assessed a 50-cent ride fee on both of them, which is paid by passengers.

The 50-cent fee has added up to more than $8 million to help pay for city enforcement efforts, including spot inspections of cars and incentives to companies and drivers to choose wheelchair accessible cars. The fee "hasn't been a barrier to the riders at all as the ride-hailing services have continued to expand," said Dave Benson, a senior manager for the Portland Bureau of Transportation. "We haven't seen the top yet."

Still, many Portland taxi owners and drivers say the fee has hurt them more than their rivals. Noah Ernst, a superintendent for Radio Cab, said many taxi drivers feel the 50-cent fee means a smaller tip because passengers lump everything together when they pay. Taxi companies also face the headache of trying to collect the fee from drivers.

He added that taxis continued to face more stringent safety, equipment and insurance requirements, and were targeted more often for inspections because their cars were easily identified by company colors and logos.

"It's not an equal playing field at all and we were trying to tell them this the entire time they were rewriting the code," he said.

As a result, he said, taxi companies are struggling and at least two have gone out of business. His company, Radio Cab, has lost more than a third of its business since 2015.

Chicago officials have calculated that ride-hailing companies have cost the city about $40 million a year in lost revenue from transit fares, parking fees, licenses and permits. In 2014, the city imposed a 20-cent fee on ride-hailing trips in response to concerns that taxis were being undercut. Two years later, that fee went up to 50 cents, with an additional two-cent fee paid by the ride-hailing companies themselves. And now, the new 15-cent fee for the transit system brings the total to 65 cents for passengers.

The city also assessed a separate $5 fee on passengers who were picked up or dropped off by ride-hailing cars at the major airports, the convention center and the Navy Pier, a popular tourist destination.

The ride-hailing fees produced nearly $39 million for the city's general fund in 2016, up from about $100,000 in 2014, according to city estimates. Last year's revenue, which is still being collected, is expected to reach $72 million.

"It's a fairly new industry and once they actually got settled in the city we saw a lot of growth," the Chicago budget director, Samantha Fields, said.

Mayor Rahm Emanuel of Chicago, who has made modernizing the L a priority, said the new 15-cent fee was the first of its kind to raise money solely for public transit from those who might not even use it because they could afford the ride-hailing cars. "I think it's a progressive transportation tax," Mr. Emanuel said. "It will make public transportation competitive with the rideshare industry."

In effect, Mr. Emanuel said, it will serve as a "backdoor approach" to fighting congestion created by the ride-hailing cars by helping shift more people — by their own choice — to the transit system. "There's a congestion fee and I would just say the rideshare fee is kind of parallel parking into the same position," he said.

The 15-cent fee is projected to bring in $16 million this year, which will be turned over to the Chicago Transit Authority. The money will be used to secure additional funding through bond sales to pay for a total of $179 million in capital improvements, according to city officials.

Kyle Whitehead, the government relations director for Active Transportation Alliance, a Chicago advocacy group for biking, walking and transit, said that the transit system contributes to the health of the city by getting more people out of cars, increasing exercise levels and reducing pollution — and it is now in dire need of money.

"The public transit system benefits everyone who lives and works in the city, he said, "regardless of whether they're using it."

A version of this article appears in print on February 18, 2018, on Page A1 of the New York edition with the headline: Uber Fees Pay for Road Repairs, Subway Upgrades, Even Schools.

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Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States

October 2017

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Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States

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Contents

Executive Summary

Ride-hailing services have experienced significant growth in adoption since the introduction of Uber, in 2009. Although business models to support the sharing of vehicles (e.g., carsharing) have been present in the United States for more than 15 years, their adoption has been somewhat limited to niche markets in dense, urban cities or college campuses. To date, carsharing has attracted over 2 million members in North America and close to 5 million globally.[1] Conversely, this new model of "shared mobility" is estimated to have grown to more than 250 million users within its first five years.[2]

The rapid adoption of ride-hailing poses significant challenges for transportation researchers, policymakers, and planners, as there is limited information and data about how these services affect transportation decisions and travel patterns. Given the long-range business, policy, and planning decisions that are required to support transportation infrastructure (including public transit, roads, bike lanes, and sidewalks), there is an urgent need to collect data on the adoption of these new services, and in particular their potential impacts on travel choices.

This paper presents findings from a comprehensive travel and residential survey deployed in seven major U.S. cities, in two phases from 2014 to 2016, with a targeted, representative sample of their urban and suburban populations. The purpose of this report is to provide early insight on the adoption of, use, and travel behavior impacts of ride-hailing. The report is structured around three primary topics, key findings of which are highlighted below.

Adoption of Ride-Hailing

- In major cities, 21% of adults personally use ride-hailing services; an additional 9% use ride-hailing with friends, but have not installed the app themselves.
- Nearly a quarter (24%) of ride-hailing adopters in metropolitan areas use ride-hailing on a weekly or daily basis.
- Parking represents the top reason that urban ride-hailing users substitute a ride-hailing service in place of driving themselves (37%).
- Avoiding driving when drinking is another top reason that those who own vehicles opt to use ride-hailing versus drive themselves (33%).
- Only 4% of those aged 65 and older have used ride-hailing services, as compared with 36% of those 18 to 29.
- College-educated, affluent Americans have adopted ride-hailing services at double the rate of less educated, lower income populations.
- 29% of those who live in more urban neighborhoods of cities have adopted ride-hailing and use them more regularly, while only 7% of suburban Americans in major cities use them to travel in and around their home region.

- Among adopters of prior carsharing services, 65% have also used ride-hailing. More than half of them have dropped their membership, and 23% cite their use of ride-hailing services as the top reason they have dropped carsharing.

Vehicle Ownership and Driving

- Ride-hailing users who also use transit have higher personal vehicle ownership rates than those who only use transit: 52% versus 46%.
- A larger portion of "transit only" travelers have no household vehicle (41%) as compared with "transit and ride-hail" travelers (30%).
- At the household level, ride-hailing users have slightly more vehicles than those who only use transit: 1.07 cars per household versus 1.02.
- Among non-transit users, there are no differences in vehicle ownership rates between ride-hailing users and traditionally car-centric households.
- The majority of ride-hailing users (91%) have not made any changes with regards to whether or not they own a vehicle.
- Those who have reduced the number of cars they own and the average number of miles they drive personally have substituted those trips with increased ride-hailing use. Net vehicle miles traveled (VMT) changes are unknown.

Ride-hailing and Public Transit Use

- After using ride-hailing, the average net change in transit use is a 6% reduction among Americans in major cities.
- As compared with previous studies that have suggested shared mobility services complement transit services, we find that the substitutive versus complementary nature of ride-hailing varies greatly based on the type of transit service in question.
- Ride-hailing attracts Americans away from bus services (a 6% reduction) and light rail services (a 3% reduction).
- Ride-hailing serves as a complementary mode for commuter rail services (a 3% net increase in use).
- We find that 49% to 61% of ride-hailing trips would have not been made at all, or by walking, biking, or transit.
- Directionally, based on mode substitution and ride-hailing frequency of use data, we conclude that ride-hailing is currently likely to contribute to growth in vehicle miles traveled (VMT) in the major cities represented in this study.

1. Introduction

The emergence of shared mobility services, such as Uber, Lyft, and Zipcar, are disrupting established transportation business models. The notion of "shared mobility" is part of a broader concept often called the "sharing economy" through which information technology has enabled the shared use of assets and services, ranging from housing (Airbnb) to small jobs and tasks (TaskRabbit). In this report, we focus our discussion on the *sharing of vehicles* through carsharing (e.g., Zipcar, car2go) and ride-hailing (e.g., Uber, Lyft). Through the collection of a large, representative sample of survey respondents in seven major metropolitan areas, we explore the adoption, utilization, and early impacts on travel behavior of shared mobility services.

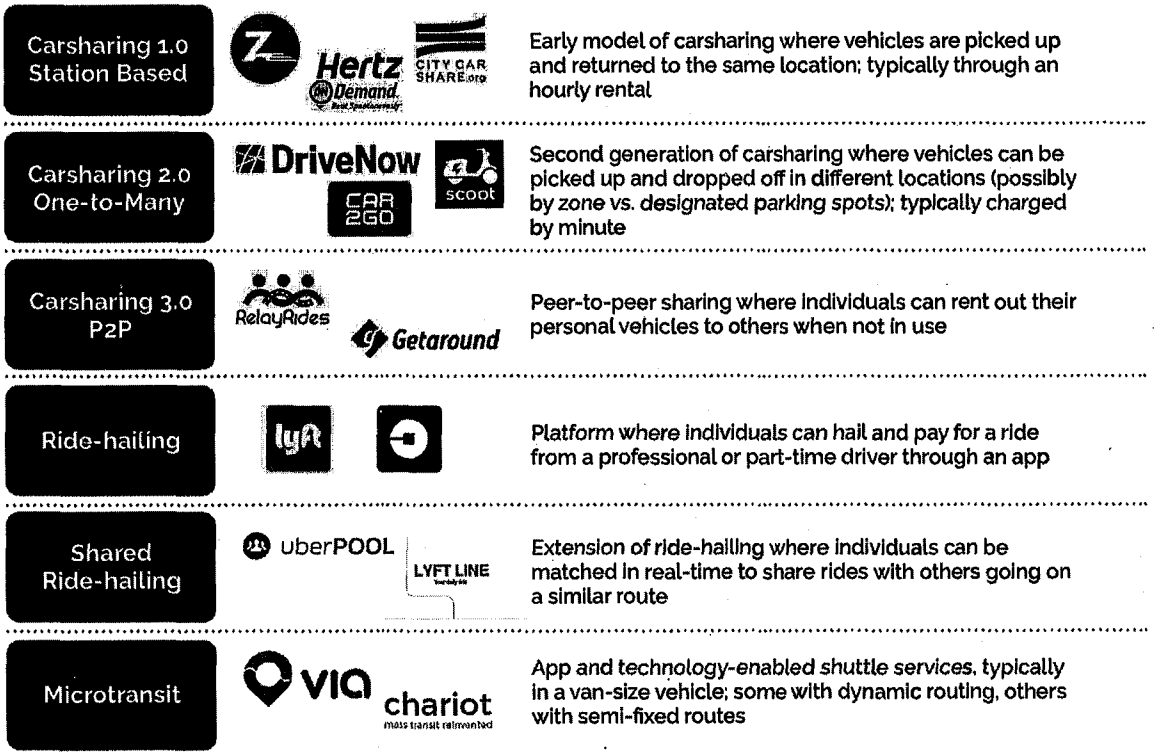
The rise of ride-hailing has sparked significant debate in cities around the world on a variety of issues including how they should be regulated, their safety implications, and how they influence travel behavior. Some suggest that shared services help reduce vehicle ownership and increase use of public transit, while other evidence suggests that they may lure riders away from transit and add to already congested streets.[3] The existing research on how ride-hailing influences travel behavior is somewhat limited due in large part to the recent, rapid growth of these services, and the lack of publicly available data for transportation planners and researchers to assess how, when, and why these services are utilized.

Shared Mobility: A Changing Landscape

First, we begin with a brief overview of the evolution from traditional carsharing programs to ride-hailing services, and the distinct features of these business models. In prior transportation literature and in the public sphere, it has been common to bundle these services and their associated impacts together. However, for reasons explained throughout this report, we believe it is important to distinguish between the different models and their impacts. Figure 1 presents the evolution of shared mobility services over the past two decades.

Traditional carsharing models, such as Zipcar, emerged in commercial form in the late 1990s in the United States. Through carsharing, individuals or households typically joined a member-based program through which they gained as-needed access to a vehicle that they then drove themselves. Two strategic advantages of early carsharing programs included the following: 1) carsharing vehicles were typically located in accessible locations throughout a dense, urban region; and 2) members were able to borrow the vehicles on a short-term hourly basis.[4]

Figure 1. The evolution of shared mobility services



Although traditional carsharing programs continue to be popular topics of transportation research and public discourse, total North American carsharing members in 2016 was estimated to be 2 million,[1] less than 0.7% of the current U.S. population. Based on these figures, we suggest that traditional carsharing services continue to serve a fairly niche market. However, the initial disruption of carsharing programs has spurred the development of similar programs by rental car companies (Hertz 24/7) and major automakers (Daimler's car2go in 2008, BMW's ReachNow – formerly DriveNow in 2011). An interesting new feature of the latter carsharing models is the ability to pick up a car at one location and drop it off at another spot or service area (one-way or free-floating carsharing).

The widespread adoption of smartphones embedded with GPS, combined with the availability of digital road maps through APIs, provided the necessary enabling technologies for ride-hailing services. Uber was one of the first services to emerge in 2009, however several similar companies have also entered (and some departed) this new market in subsequent years (Sidecar, Hailo, Lyft, Didi Kaudi). The common feature of ride-hailing services is the ability for a traveler to request a driver and vehicle through a smartphone app whereby the traveler's location is provided to the driver through GPS. With the support of GPS technology, digital maps, and routing algorithms, users are provided with real-time information about waiting times. Proponents of these services

argue that they provide a more safe, reliable, efficient transportation experience. However, others argue that they essentially operate as illegal taxis. While the regulation of these services continues to evolve, there is agreement on one issue: ride-hailing services have begun to disrupt traditional transportation systems in cities across the globe.

When ride-hailing services were first launched, they were commonly referred to as "ridesharing" or "peer-to-peer mobility" services. Many experts initially argued that this label was a misnomer because drivers and passengers did not share the same destination,[5] but rather, the drivers provided services analogous to limousines or taxis. In 2013, a California Public Utilities Commission ruling officially defined these services as transportation network companies (TNCs), although they are still often colloquially referred to as ridesharing, and more recently, ride-hailing services.

In 2014, both Uber and Lyft announced the pilot of new products that harness algorithms to match passengers who request service along similar routes in real-time, enabling them to share rides (UberPool, LyftLine). Although the paid drivers of UberPool and LyftLine rides typically do not share the same destinations as their passengers, other business models and apps are emerging in an attempt to enable traditional carpooling – where the driver does indeed share a similar route (Waze's Rider, Scoop).

Both carsharing services and ride-hailing services both reflect a shift away from vehicles as a *product* to vehicles as a *mobility service*. However, we find that the service models and rates of adoption are quite different, with ride-hailing services attracting a much larger and broader segment of the total population. The results of this study focus primarily on ride-hailing. In this report, we present new evidence on the adoption, utilization rates, and early impacts on travel behavior of these rapidly-growing services.

The remainder of this report is organized as follows. In Section 2, we elaborate on the academic and industry research on shared mobility adoption and their potential impacts. Section 3 briefly describes the methodology for the data collection. Section 4 presents early data on the demographics of ride-hailing adopters, utilization rates, and their correlation with earlier carsharing services. Section 5 examines vehicle ownership rates and potential impacts of ride-hailing on vehicle use. Section 6 presents data on the relationship between ride-hailing and transit use. We conclude with a discussion of this study's key findings, potential policy implications, and directions for future research. The findings presented here represent one study of a series of evaluations on future urban mobility trends based on this dataset.

2. Literature Review

This section presents a summary of the academic literature on shared mobility and recent industry figures on the adoption of shared mobility. As noted in a special issue on shared-mobility research in *Transportation* by Le Vine and Polak, the innovation in business models has outpaced the speed at which researchers can converge around a common lexicon.[6] Furthermore, we posit that the speed of innovation in mobility *business models*, as well as distinct mobility *products* (uberX, UberPool, Lyft Shuttle), presents significant challenges for transportation researchers to develop new data collection methods and methodologies that can effectively measure the potential impacts of these new mobility services on our transportation systems and infrastructure. Hence, in this review we draw on recent industry and consulting reports on the adoption and reported use of shared mobility.

Adoption of Carsharing and Ride-Hailing Services

Given the recent emergence of ride-hailing services (Uber, Lyft), the majority of academic studies on shared mobility to date have focused on the adoption and impacts of *carsharing* programs. Some of the earliest carsharing studies date back to 2001, when City CarShare was first launched in San Francisco. Based on surveys of members and non-members three months, nine months, and two years into the program, Cervero reported on the demographics of early adopters.[7, 8, 9] Cervero found that carsharing served a fairly distinct and unique market – young, moderate-income, non-traditional households without cars (over three-quarters of the surveyed carshare members had no household vehicles).

Similar studies deployed through carsharing organizations in North America found that members tended to be young, well-educated, and of moderate income levels.[10] However, a recent study by Clewlow using regional travel survey data from a representative sample suggests that not only are carsharing members more educated, they often have higher incomes than their non-carshare member counterparts.[11] Although global carsharing membership had grown to approximately 5 million users by 2016, after becoming commercially available 15 years ago,[1] it continues to represent a somewhat niche market – particularly compared to the rapid, and widespread growth of ride-hailing, which, according to news reports, has reached well over 250 million users globally.[2]

The neighborhood characteristics that support carsharing programs are generally similar to those of emerging ride-hailing services. Several studies have identified common factors that contribute to successful carsharing programs, including limited parking, availability of good public transportation, walkability, high density, and mixed-use neighborhoods.[3,12,13,14] Numerous theoretical studies found that dynamic ride-sharing models, the core enabling concept of ride-hailing, were more likely to work in cities with high population density, where lead (or wait) times

can more easily be reduced for both drivers and passengers.[15, 16, 17] As commercial ride-hailing services have expanded, they have initially targeted major, metropolitan cities around the globe.

Due to the competitive market for ride-hailing, there is limited data on the adoption of Uber, Lyft, and other similar services. However, very recently, new reports have emerged which find that ride-hailing users tend to be younger, more educated, have higher incomes, and live in more urban areas.[18] Based on a Pew study released in May 2016, one in five urban Americans (21%) had used ride-hailing services. While it may still be early in the rise of ride-hailing services, it seems clear that the adoption ride-hailing has already far out-paced the growth of traditional carsharing services of the past.

Impacts of Shared Mobility on Travel Behavior

Previous empirical research examining the possible impacts of shared mobility on travel behavior focuses almost entirely on carsharing. Cervero's initial studies indicated that carsharing appeared to induce travel by automobile among early adopters.[7] However, subsequent research revealed that as carsharing adoption spread, members were 12% more likely to shed a vehicle, and on average experienced a net reduction in vehicle miles traveled (VMT).[8] Martin and Shaheen found that joining carsharing reduced the average number of vehicles per household from 0.55 to 0.29 (a reduction of 0.26 vehicles).[10] More recently, Firnkorn and Muller estimated more modest vehicle reductions between 0.05 to 0.11.[19]

Another dimension of travel behavior explored in previous carsharing studies is the potential impact of carsharing on public transit and non-motorized travel (walking and bicycling). Martin and Shaheen found that there was a slight net decrease in public transit use, and a significant increase in walking, bicycling, and carpooling after individuals joined carsharing.[9] However, there were significant variations in travel behavior across the different carsharing organizations whose members were surveyed. Another study by Stillwater et al examined the relationship between carsharing and public transit use, finding ambiguous results.[20]

Almost all of the previous studies used before-and-after or retrospective questioning of carsharing members to establish a relationship between carsharing and travel behavior (vehicle holdings, VMT, and transit use). However, a critical issue that is often unaddressed is the likely spurious relationship between the built environment, carsharing adoption, and travel behavior. While previous studies have observed that carsharing members tend to own fewer vehicles and drive less after joining carsharing, what is less well understood is the extent to which the observed travel decisions can be attributed to *carsharing adoption itself*, as opposed to the *prior self-selection* of individuals into urban neighborhoods that are consistent with their travel preferences. By design, shared vehicle services are generally placed in high-density, transit-accessible neighborhoods where vehicle ownership and vehicle miles traveled (VMT) are known to be lower than average.[21] Hence, it is unknown whether the true "effect" of carsharing or ride-hailing (or some portion of the effect) may simply be due to the prior residential and travel preferences of carsharing

members. Previous studies control for residential changes *after* joining carsharing;[10] however, residential changes immediately *prior* to joining carsharing have not been measured.

In an attempt to control for built environment effects, Clewlow conducted a study comparing the travel behavior indicators of carshare adopters and non-adopters with residential locations in the same U.S. Census tracts using a statistically representative sample.[11] Carsharing members living in very dense, urban neighborhoods owned significantly fewer vehicles: 0.58 versus 0.96. However, there was no difference in vehicle holdings among suburban carshare members versus non-members. This recent work suggests that the core neighborhood characteristics that make carsharing successful (limited parking, good transit availability, walkability) likely also play a significant role in previously estimated "effects" of carsharing on vehicle holdings. As adoption of shared mobility becomes more widespread, continued attention to the relationship between the built environment and travel behavior is critical.

Only very recently have reports emerged that feature the potential travel behavior impacts of ride-hailing services, including an American Public Transportation Association (APTA) report released in March 2016 and a Pew Research Center report released in May 2016.[22, 18] The APTA analysis found that the more people used shared modes (including carsharing, ride-hailing, and bike-sharing), the more likely they were to use public transit and own fewer vehicles. Similarly, the Pew study found that frequent ride-hailing users were less likely to own a vehicle and more likely to use a range of transit options. The latter acknowledged that this trend carries a significant geographic component – that is, those Americans who live in an urban center are much more likely to have greater access to ride-hailing services, alongside a range of transportation alternatives that allow them to live a car-free (or car-light) lifestyle.

More recent work on the potential impacts of ride-hailing has found that after ride-hailing left the city of Austin, 41% of individuals turned to driving to fill the void and 9% of individuals purchased a vehicle.[23] The authors note that the data are based on a convenience sample that are not representative of the broader population. In another regional survey based in the Denver metropolitan area, research has found that 34% of people would have walked, biked, or used public transit instead of using ride-hailing. An additional 12% would not have made the trip at all.[24]

We build on prior research through this survey of several major U.S. metropolitan areas with a sampling method designed to be representative of the urban and suburban populations in those regions. Our research confirms and expands on the aforementioned research conclusions; however, we also find contradictory and new evidence about how ride-hailing services influence travel behavior. Further work on a variety of topics is needed.

3. Methodology

The objectives of this study were to examine the adoption of shared mobility services (carsharing and ride-hailing) in the United States, including the demographics of adopters, reasons for non-adoption and attrition, and potential differences in travel behavior between adopters and non-adopters. An internet-based survey was deployed in major metropolitan regions in the United States, gathering demographic, travel, and residential choice data as described briefly in the sections below.

Survey Design

This study is based on an extensive self-administered travel and residential choice survey, drawing on questions commonly used in the American Community Survey (ACS), regional transportation surveys (e.g., California Household Travel Survey), and previous travel behavior research. The survey was deployed in two phases, first between September 2014 to March 2015 (Survey 1), and again between August 2015 and January 2016 (Survey 2). The results of this report are based on the latter survey deployment.

The surveys were comprised of five and six sections, organized as follows: 1) attitudes towards travel, neighborhoods, technology, and environment; 2) household demographics; 3) current and previous residential decisions; 4) travel behavior including use of shared mobility services; 5) vehicle ownership and preferences; and 6) life stage events (Survey 2 only). A broader objective of the survey design and deployment was to gather extensive data on urban populations' current, past, and potential future travel, residential, and vehicle ownership choices. The findings presented here represent one study of a series of evaluations on future urban mobility trends based on these datasets.[25, 26]

Sampling

We selected seven major metropolitan areas in the United States for our survey: Boston, Chicago, Los Angeles, New York, San Francisco/ Bay Area, Seattle, and Washington, D.C. Using data from the 2011-2013 American Community Survey (ACS) 3-Year Statistics, we screened potential neighborhoods to vary systematically on population density and housing density. The age, income, and gender distributions of survey respondents were also constrained to match the reported distributions of each metropolitan region sampled.

We built our survey on an internet-based platform that enabled complex survey logic and branching. The survey was pre-tested on faculty and researchers with expertise in travel survey design, transportation modeling, and shared mobility, as well as a snowball sample of the general population. Through the sampling firm employed for this study, the survey was pre-tested on 50

respondents from five metropolitan regions. Between each pre-test, the survey was refined based on expert feedback, general feedback, and analysis of the survey data.

We administered the survey using a targeted email approach to adult respondents (18 and older) pre-identified as residing within the major metropolitan zip codes selected for this study. A total of 4,094 completed responses were collected between the two surveys, with 2,217 from respondents residing in dense, urban neighborhoods and 1,877 from more suburban locations. By design, the responses were evenly distributed between the five metropolitan regions, Boston, Chicago, New York, Seattle, and Washington, D.C. for Survey 1, and with an oversampling of respondents for the San Francisco and Los Angeles regions for Survey 2.

Following the survey deployment and data cleaning, the data were weighted using an iterative technique that matches gender, age, and income levels to ACS data at the metropolitan level. On the whole, the demographics of the respondents reflected the metropolitan areas surveyed. Less than 1% of the responses required weighted values of 5 or more. Similarly, the majority of ride-hailing and carsharing results varied little between the weighted and unweighted data. Unless otherwise noted, the results presented throughout this report are weighted.

4. Adoption of Ride-Hailing Services

In major metropolitan areas, we find that 21% of adults have personally used ride-hailing services (i.e. they have installed and used ride-hailing apps), and an additional 9% of adults have used ride-hailing with friends (see Figure 2). Unlike previous studies, we find that only 10% of American adults in major cities have not heard of ride-hailing services such as Uber and Lyft. The adoption rates in our study are significantly higher than those found in previous reports (which range from 10% to 15%)[18] in large part due to our focused sampling of major metropolitan areas, including both urban and suburban neighborhoods. These results demonstrate the widespread use of ride-hailing services in cities, particularly as compared with the adoption rates of prior carsharing services, which are roughly an order of magnitude smaller.

Frequency of Ride-Hailing Use

Similar to the higher ride-hailing adoption rates found in our survey as compared with previous research, we also find higher rates of *utilization* among ride-hailing users in cities. Nearly a quarter (24%) of users report that they use ride-hailing services on a weekly to daily basis. However, among the majority of ride-hailing adopters these services are used less frequently: 41% use them 1 to 3 times a month and 34% use them less than once a month.

In a portion of our survey focused on trip purpose and travel mode, respondents were asked to select their top three modes for several common activities, including going to 1) restaurants and cafes, 2) shops and services, 3) family and community activities, and 4) bars and parties. By a fairly wide margin, the most common activity ride-hailing is used for is going to bars and parties: 38% of adopters regularly use it for this purpose (see Figure 3).

Figure 2. Adoption and utilization of ride-hailing

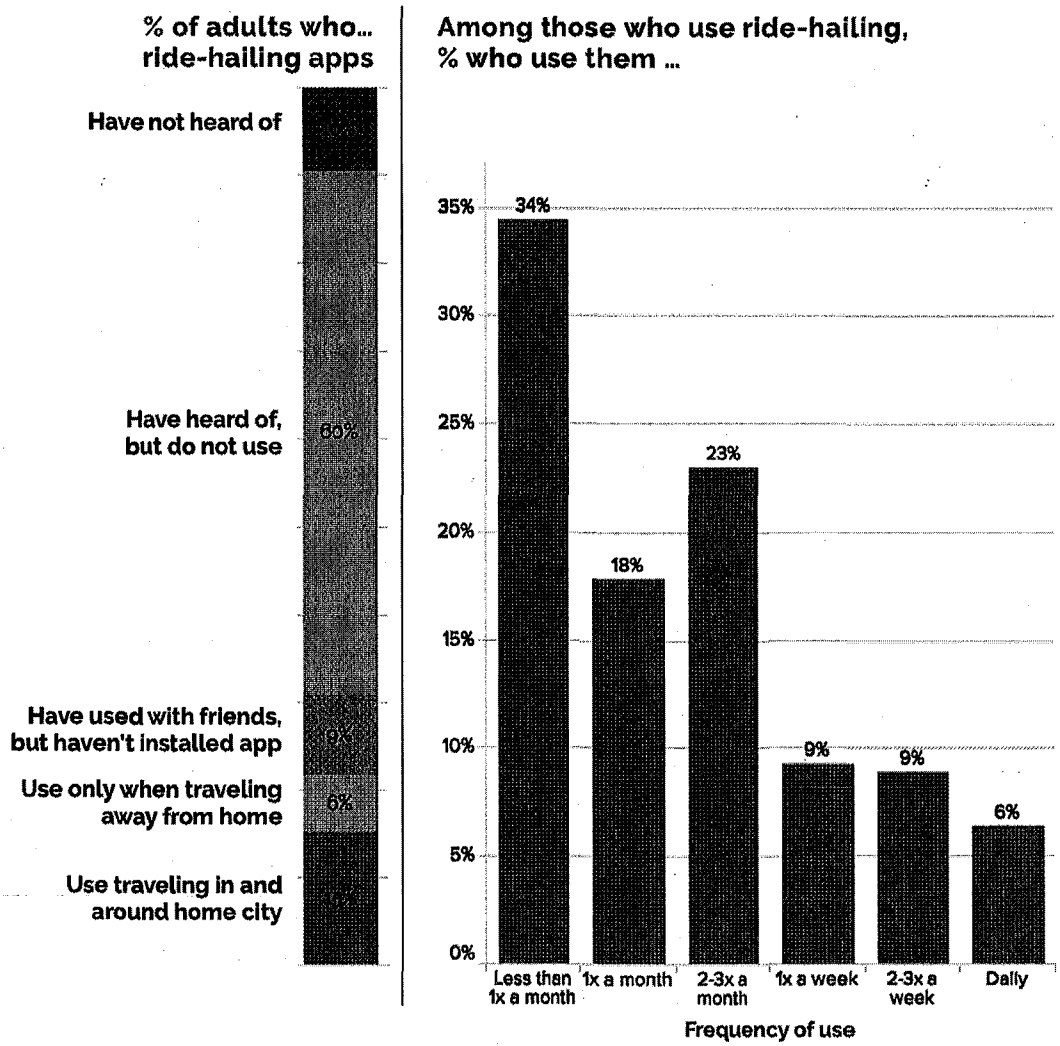
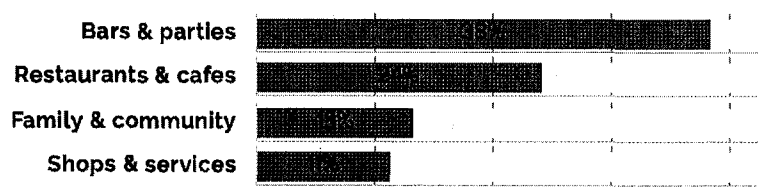


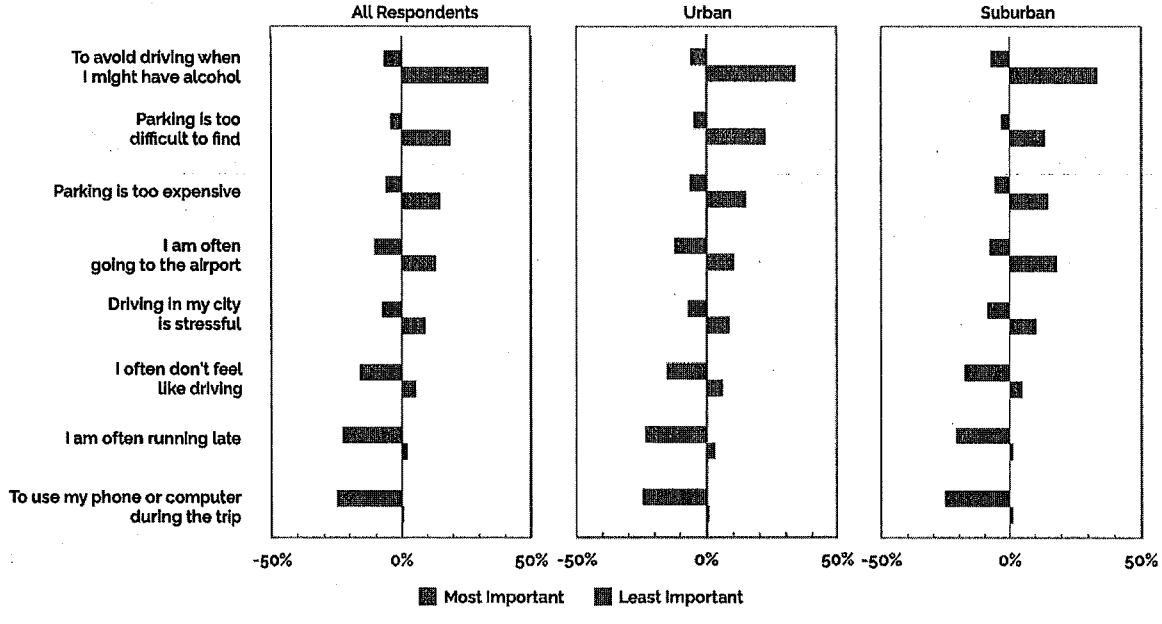
Figure 3. Trip purpose



Among those who own a vehicle, respondents also were asked to select the top reason that they use ride-hailing services instead of driving themselves (see Figure 4). Both urban and suburban respondents cite the desire "to avoid driving when I might have alcohol" as one of the top reasons they use ride-hailing (33%). Uber and Mothers Against Drunk Driving (MADD) jointly released a study in 2015 which found that drunk-driving crashes fell among drivers under the age of 30 in markets where Uber operates following the launch of their uberX service.[27] Similarly, another study found that drunk driving deaths fell by 3.6% to 5.6% following the availability of Uber in California markets.[28] Based on our survey data on the reasons for ride-hailing use, these new findings similarly suggest that ride-hailing may reduce the number of drunk drivers on the road.

Parking constraints also play a critical role in the choice among both urban and suburban ride-hailing adopters to use these services versus drive. Difficulties finding parking and the price of parking are cited as the second and third most common reasons that adopters used ride-hailing. Among urban respondents, 37% of respondents cited parking-related reasons for substituting ride-hailing for personal driving. These results on ride-hailing substitution reinforce the well-documented research that pricing and constraining parking can reduce driving and vehicle miles traveled.[29, 30]

Figure 4. Reasons for using ride-hailing services instead of driving oneself



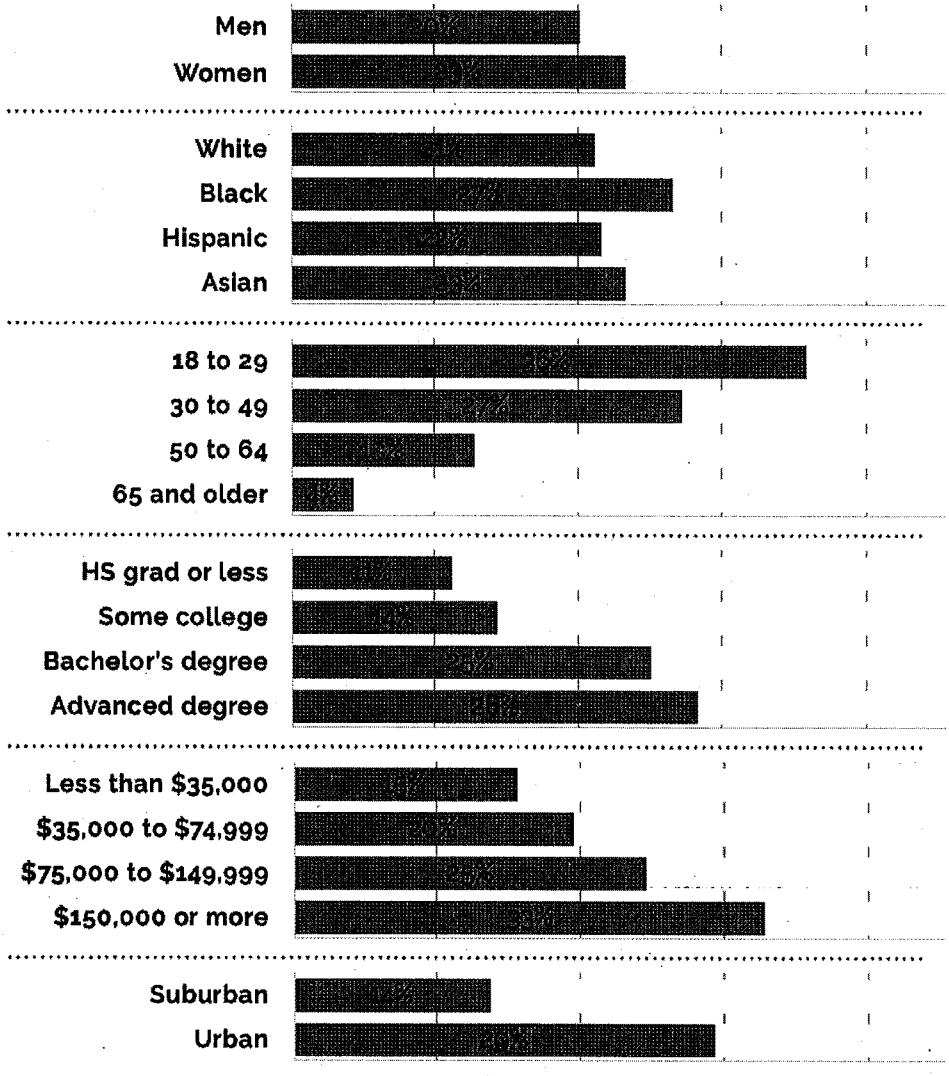
Demographics of Ride-Hailing Users

Similar to the adoption trends for new technologies and for prior carsharing services, we find that early ride-hailing adopters tend to be younger, more educated, and have higher incomes than the rest of the population (see Figure 5). The average age of respondents who have not used ride-hailing is 51, as compared with the average age of ride-hailing users: 37. There is a fairly significant gap in adoption between the youngest and oldest segments of the population. More than one-third (36%) of those between 18 and 29 years of age use ride-hailing services, while only 4% of those 65 and older do. Although ride-hailing (and in the future potentially autonomous vehicles) are often cited as a possible mobility solution for the aging Baby Boomer population, this research suggests that there are significant hurdles to overcome from a technology adoption perspective.

The other significant differences in adoption rates are between those who are more educated and have higher incomes, and those who do not. The adoption rate among the college educated is double (26%) the adoption rate of those without a college degree (13%); those with advanced degrees also have slightly higher adoption rates than those with a bachelor's degree. Similarly, respondents with an annual household income of $35,000 or less had an adoption rate of 15%, as compared with 33% of those earning $150,000 or more. As cities and transit agencies consider whether or how to integrate these services into publicly-subsidized transportation networks, these gaps in adoption among the wealthy and the poor will need to be addressed.

Similar to carsharing business models, ride-hailing services tend to be offered primarily in more urban neighborhoods, where higher population density enables higher frequency of use and utilization rates of vehicles. Unsurprisingly, we find that 29% of urban Americans had used ride-hailing services, as compared with 14% of those living in suburban neighborhoods. In addition, while 23% of urban respondents use ride-hailing in and around their city (versus only while traveling away from home); only 7% of suburban respondents use them in their home area. Some have suggested that the current ride-hailing business model is beginning to hit a ceiling. We believe that a significant factor influencing the long-term growth of ride-hailing is whether these services can prove to be more viable in suburban geographies.

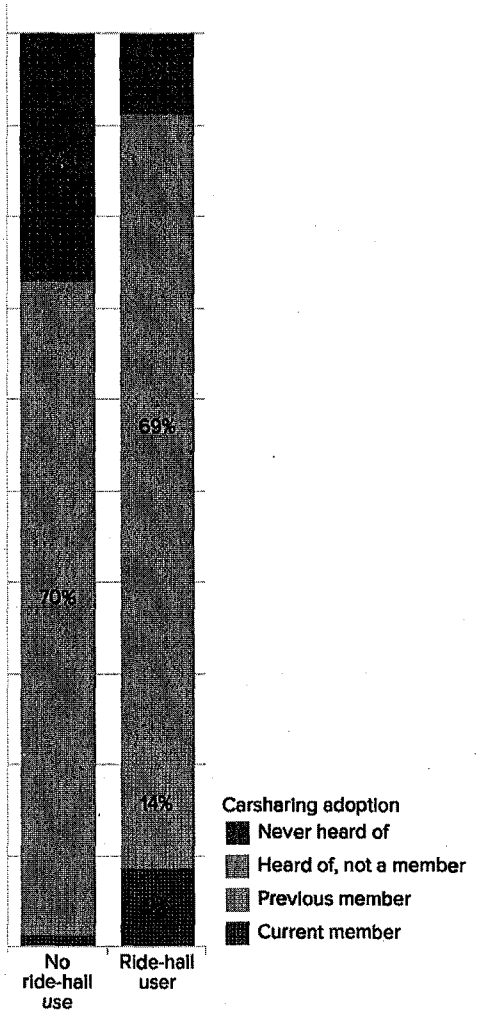
Figure 5. Ride-hailing adoption by demographics and geography

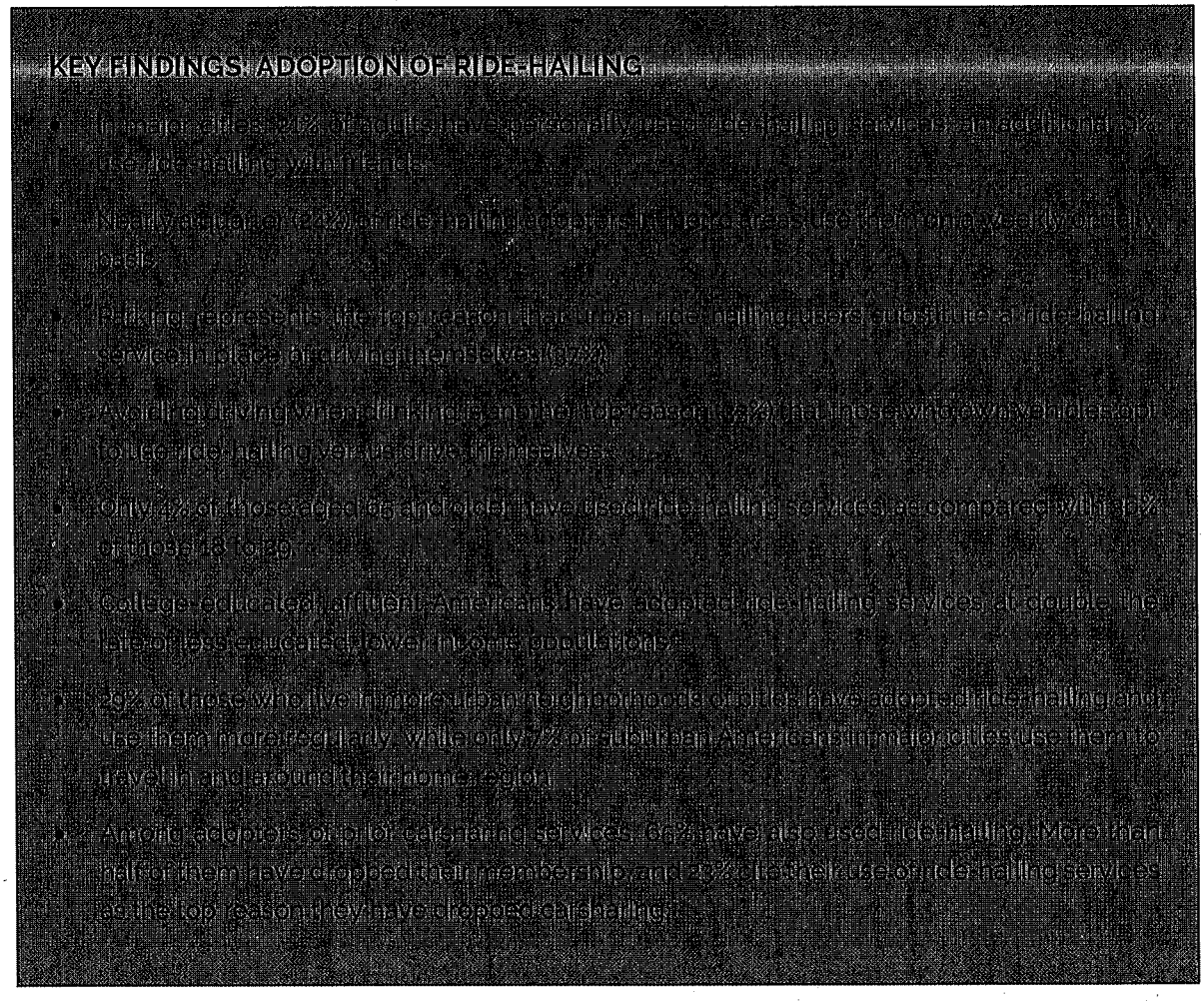


There is a significant overlap in the adoption of carsharing adoption and ride-hailing adoption, but not vice versa. The vast majority of carsharing adopters (both current and previous members) have used ride-hailing (65%); however, given the relatively niche market that carsharing served, and the much higher adoption rates of ride-hailing, the opposite does not hold (see Figure 6). Further, when we explored reasons that previous carsharing members dropped their membership, the top reason was that they "started using services like Uber, Lyft or other on-demand mobility" (23%). Another common reason for dropping carharing membership was the purchase of a vehicle (16% of those who dropped membership). This early research suggests that although carsharing and ride-hailing use may be complementary, the convenience of ride-hailing lends itself to easily substitute for trips that may have previously been served by carsharing. In

fact, current industry news points to challenges facing the carsharing industry given the rising popularity of ride-hailing services such as Uber and Lyft.[31]

Figure 6. Carsharing membership among ride-hailing users



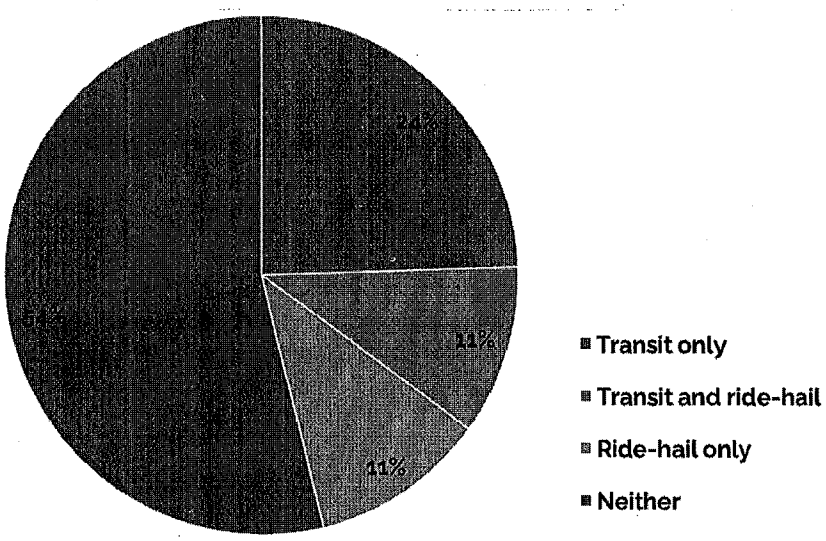

KEY FINDINGS: ADOPTION OF RIDE-HAILING
In major cities, 21% of adults have personally used ride-hailing services, and 15% of them use ride-hailing with a friend.
Nearly a quarter or 24% of ride-hailing adopters in major cities use them on a weekly or daily basis.
Parking represents the top reason that ride-hailing users cite as a ride-hailing service in place and living themselves (37%).
Avoiding driving when drinking is another top reason (32%) that those who own vehicles cite for ride-hailing versus driving themselves.
Only 4% of those aged 65 and older have used ride-hailing services as compared with 31% of those 18 to 29.
College educated, affluent Americans have adopted ride-hailing services at double the rate of less educated, lower income populations.
29% of those who live in more urban neighborhoods of cities have adopted ride-hailing and use them more frequently, while only 7% of suburban Americans in major cities use them to travel in and around their home region.
Among adopters of prior car-sharing services, 6% have also used ride-hailing. More than half of them have dropped their membership and 23% cite their use of ride-hailing services as the top reason they have dropped car-sharing.

5. Vehicle Ownership and Driving

Two important questions facing policymakers are whether the adoption of ride-hailing services can reduce vehicle ownership and/or total vehicle miles traveled (VMT). Contrary to recent research on the topic, with this more representative sample of people in major cities we find that ride-hailing users on average do not possess significantly fewer vehicles than their non-ride-hailing counterparts, and have more vehicles than those who only use transit. For this analysis, we segment the respondents into the following categories (see Figure 7):

- "Transit only": people who said they used a public transit service (bus, heavy rail, light rail, or ferry) for their commute or as a mode for the regular trip-generating activities (social, shopping, services, eating) within the last three months, and who have not downloaded a ride-hailing app.
- "Transit and ride-hail": people who use transit in the ways described above, and who have downloaded and use a ride-hailing app.
- "Ride-hail only": people who have downloaded and use a ride-hailing app, and who do not use transit regularly for common trip-generating activities.
- "Neither": people who do not use transit regularly and who have not used a ride-hailing app. For the most part, these are car-centric respondents.

Figure 7. Segments compared: transit only, transit and ride-hail, ride-hail only, and non-users of shared mobility



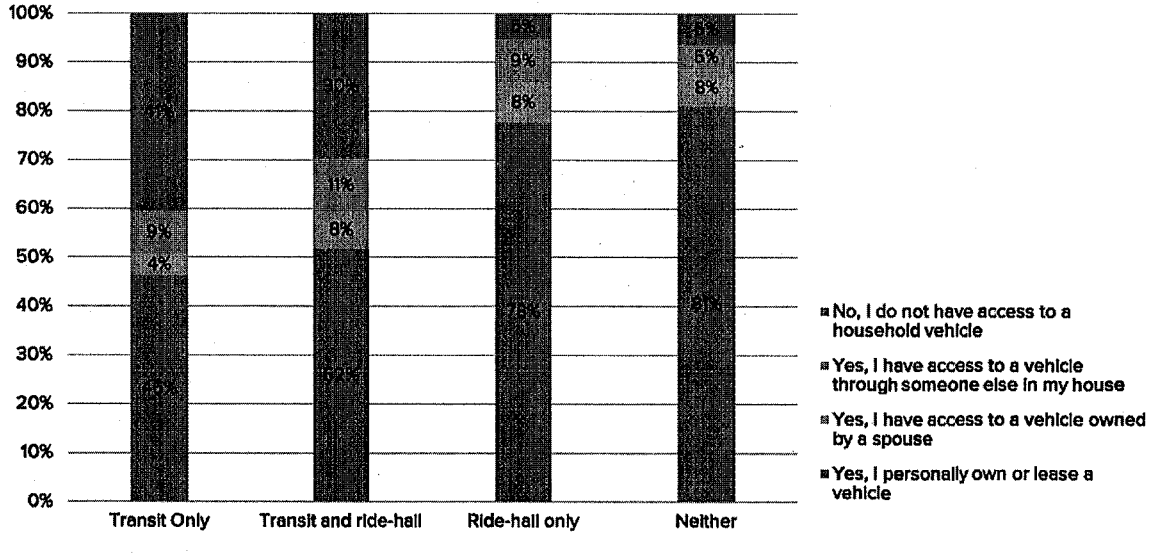
Personal Vehicle Ownership Among Ride-Hailing Users

We find that personal vehicle ownership rates of the "transit and ride-hailing" segment (52%) are higher than those who only use transit (46%). We find that personal vehicle ownership between "ride-hailing only" users are not that different from the rest of the car-centric population (78% and 81%, respectively). Figure 8 provides a detailed overview of personal vehicle access. Similarly, a larger portion of "transit only" respondents have no access to a household vehicle (41%), as compared with "transit and ride-hail" respondents (30%), who have greater access to a vehicle.

In our survey, we examined both the number of household vehicles (see Figure 9), as well as how the respondents characterized their relationship to vehicles (i.e. whether they personally owned a vehicle, or had access to one through a household member). In general, we found that large numbers of Millennials did not personally own vehicles, but may have had access to one – typically through a parent or roommate.

Our results are a bit different from a recent APTA report which defined a classification of "supersharers": people who had used some combination of bikesharing, carsharing, or ride-hailing across common trip types over the past three months. The difference between prior results and ours can likely be explained by the representative sampling approach used in this study, as compared with the convenience sampling approach in the former. The respondents from the former study were sourced through carsharing and bikesharing firms, members of which likely represent less than 5% of the population. Previous research has shown that they are particularly affluent, educated, and often have environmentally-oriented preferences. What the APTA data likely confirms is that carsharing members own fewer vehicles and use more transit; little can be concluded about ride-hailing users from a non-representative convenience sample.

Figure 8. Vehicle ownership and access, by ride-hailing and transit use

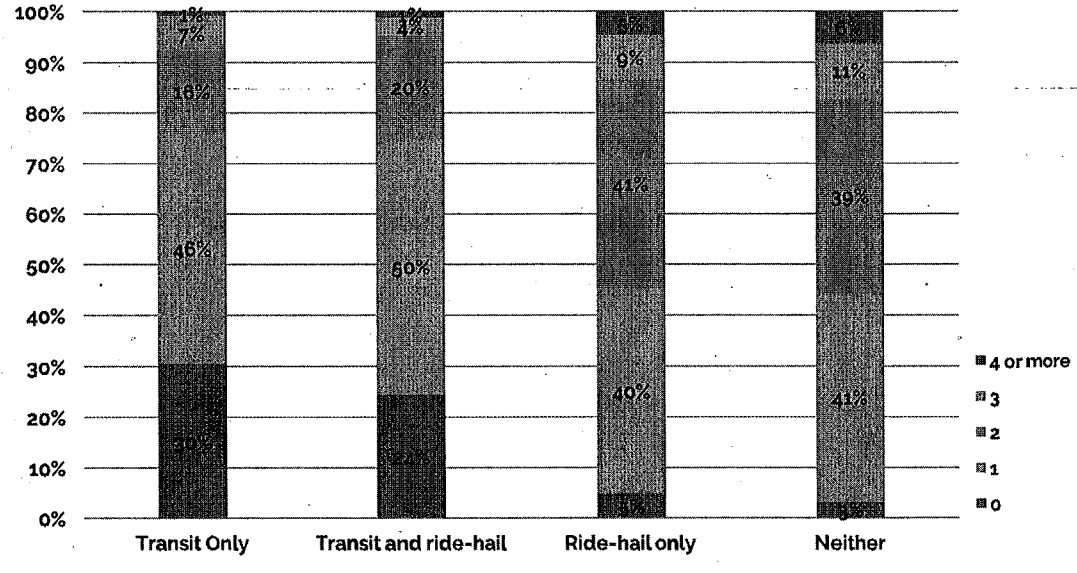


Household Vehicle Ownership Among Ride-Hailing Users

At the household level, we also find that ride-hailing users have slightly more vehicles than those who only use transit (see Figure 9). "Transit-only" respondents own on average 1.02 cars per household, and "transit and ride-hail" respondents own on average 1.07 cars per household. We found no significant differences in household vehicle ownership rates between "ride-hail only" respondents and those who use neither ride-hailing nor transit.

That there is little difference between ride-hailing users and the rest of the population in terms of vehicle ownership is not particularly surprising. Vehicle ownership decisions are mid- to long-range choices that individuals and households make, influenced primarily by other factors other than access to a service like ride-hailing. Household income, employment status, and access to parking are all strongly correlated with personal vehicle ownership decisions. While access to transit, and potentially ride-hailing, may influence these decisions over the long term, it is important that future research account for the primary factors influencing these choices: socio-demographic, attitudinal, and built environment characteristics.

Figure 9. Household vehicle ownership, by ride-hailing and transit use



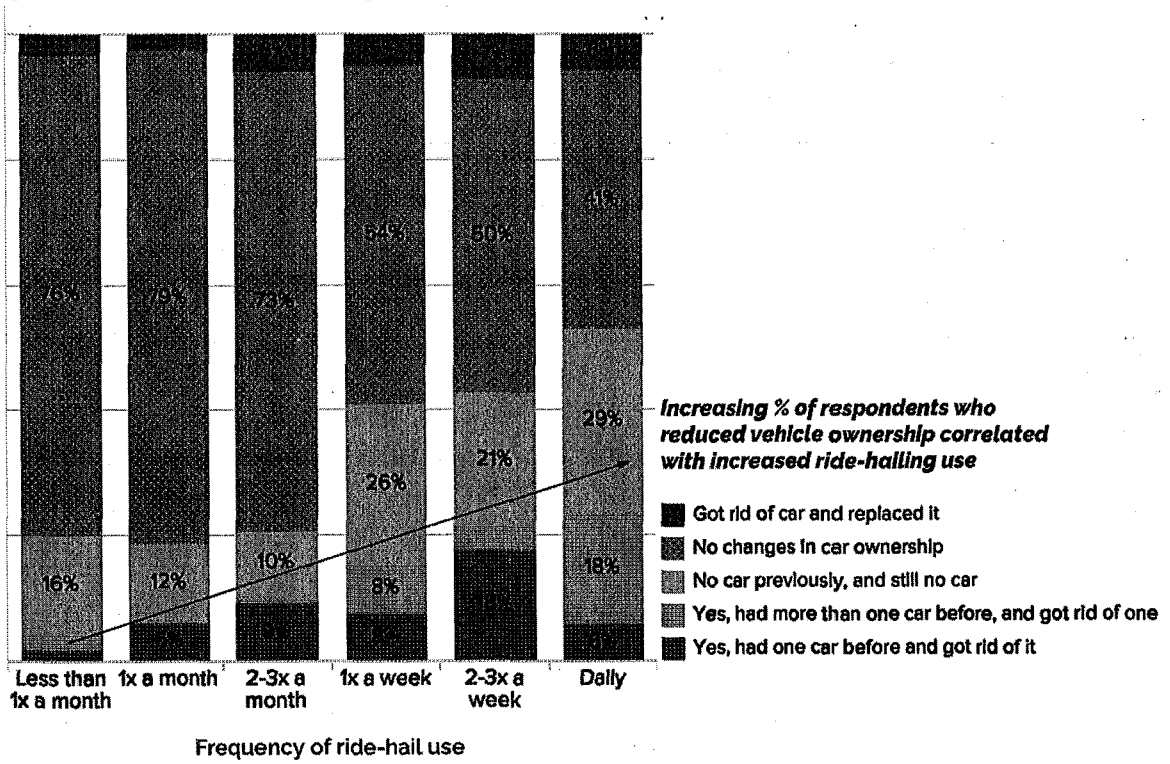
Vehicle Reduction and Ride-Hailing Utilization

When asked whether they had made any decisions to get rid of a vehicle, the vast majority of ride-hailing respondents (91%) had made no changes in their vehicle ownership, with 16% indicating that they had no vehicle to begin with. However, 9% respondents indicated that they had disposed of one or more household vehicles. This figure is significantly lower than previous work on shared mobility,[22] most likely due to the representative nature of this sample versus the convenience-based nature of prior survey samples.

When we examined the relationship between ride-hailing utilization and vehicle reduction, we found a strong correlation between increasing ride-hailing use and increasing rates of vehicle reduction. That is, the more frequently an adopter uses ride-hailing services (from once a month to daily), the more likely they were to have reduced their household vehicles (see Figure 10).

From an environmental benefits perspective, the reduction of vehicle ownership is primarily of value insomuch as it reduces total vehicle miles traveled (VMT). What is currently unclear is the net vehicle miles traveled (VMT) adjustment due to the introduction of ride-hailing – has it gone up or down? And what are the likely longer-term impacts of these services?

Figure 10. Vehicle shedding, by ride-hailing utilization rate



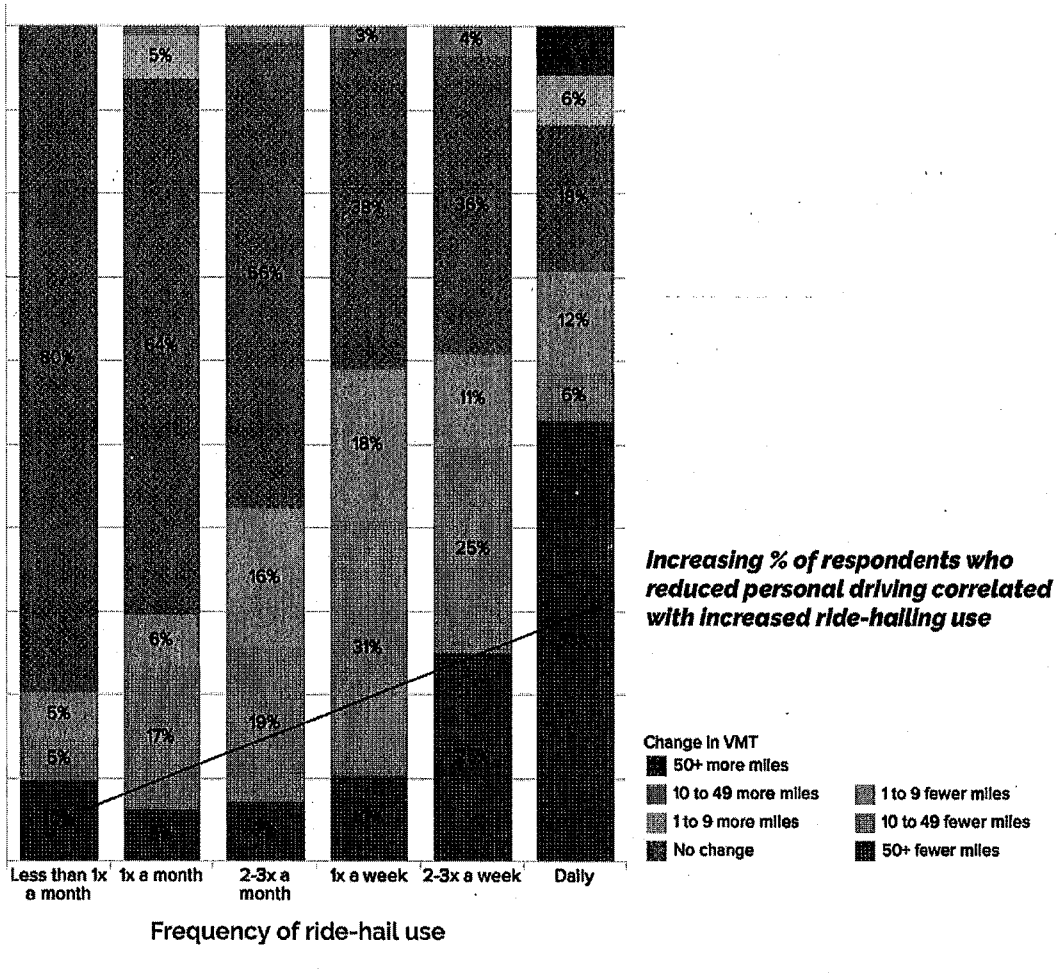
Vehicle Miles Traveled and Ride-Hailing Utilization

While the majority of individuals (59%) individuals who use ride-hailing indicated that there was no change in their personal driving habits, 29% of individuals indicated that they reduced their personal driving by 10 or more miles a week since they started using ride-hailing services. Given that some of these adopters use ride-hailing services often, we examine their self-reported change in vehicle miles traveled (VMT) in the context of their ride-hailing use (see Figure 11).

The key takeaway is that while some portion of ride-hailing users reduce the miles that they personally drive, these miles return in the form of miles traveled in a ride-hailing vehicle. One might assume that the net change in VMT is negative; that is, a reduction in VMT. However, in order to definitively quantify the VMT impacts we must determine:

- What modes ride-hailing trips substitute for (personal driving, transit, biking, walking)
- Passenger miles within ride-hailing vehicles
- Additional "dead-heading" vehicle miles (those driven without a passenger)

Figure 11. Driving reduction, by ride-hailing utilization rate



KEY FINDINGS: VEHICLE OWNERSHIP AND DRIVING

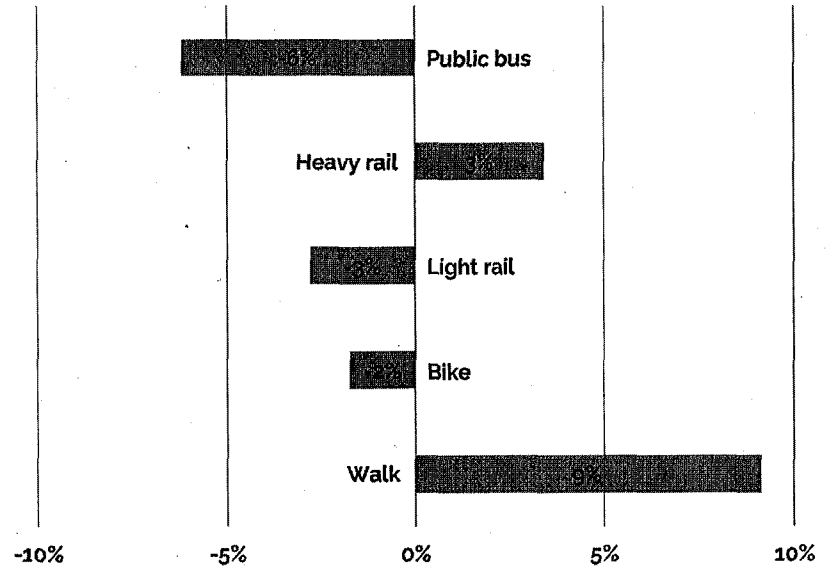
- Ride-hailing users who also use transit have his/her personal vehicle ownership rates than individuals who only use transit vs. use auto.
- A larger portion of transit travelers have no household vehicle (0%) as compared with transit and rental travelers (2%).
- At the household level, ride-hailing users have slightly more vehicles than those who only use transit for car-free household vehicle use.
- Among non-transit users, there are no differences in vehicle ownership rates between ride-hailing users and additionally car-sent to non-riders.
- The majority of ride-hailing users (61%) have not made any changes with regards to whether or not they own a vehicle.
- Those who have reduced the number of cars they own and the average number of miles they drive personally have substituted those trips with increased ride-hailing use. The net VMT effects are unknown.

6. Impacts of Ride-Hailing on Transit Use

Another important policy question that these results address is the extent to which ride-hailing complements or substitutes for public transit services. We address this question with a more nuanced approach based on the premise that not all "public transit" services are created equal. Some are more frequent, reliable, and operate in environments where they may be the most convenient choice, while others are not. In short, the question of whether ride-hailing competes with or complements transit depends on the circumstances. Survey respondents were asked whether they use different public transit services, including bus, heavy rail, and light rail, more or less after they began using ride-hailing. Results are displayed in Figure 12 below.

On the whole, the majority of respondents indicated that there was no change in their transit use. However, based on the results of those who did change their behavior, we find that shared mobility likely attracts Americans in major cities away from bus services and light rail (6% and 3% net reduction in use, respectively), and may serve as a complementary mode for commuter rail (3% net increase in use). As compared with previous studies that have suggested shared mobility services complement transit services, we find that based on the type of transit service in question the substitutive versus complementary nature of ride-hailing services varies.

Figure 12. Changes in transit use, biking, and walking after adoption of ride-hailing services

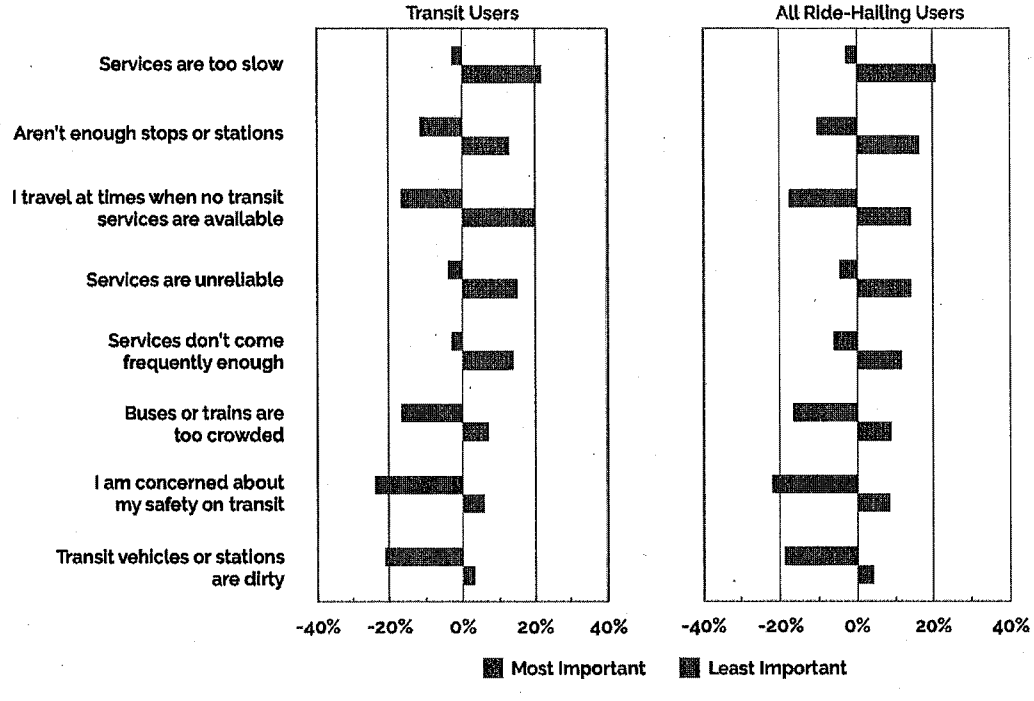


Survey question: "Since you started using on-demand mobility services such as Uber and Lyft, do you find that you use the following transportation options more or less?"

When asked explicitly why one might substitute ride-hailing for public transit, the most popular response of all ride-hailing respondents was that "services are too slow" (see Figure 13). We also segmented regular (versus infrequent) transit users as shown below. A variety of other reasons people use ride-hailing over transit were common, including the lack of available stops, traveling at times when transit services are not available, and perceived unreliability of transit services.

Recent research of New York City data also finds that travel demand growth has shifted away from public transit services towards ride-hailing services.[3] While many suggest that ride-hailing can be complementary to public transit, current evidence suggests that ride-hailing is pulling more people away from public transit in cities rather than adding riders. The broader implications are significant, particularly if autonomous vehicle technology becomes commercially viable. The few modeling simulations of cities that consider a replacement of transit services have found that total vehicle miles traveled (VMT) increase moderately to substantially if shared-ride autonomous vehicles replace transit: a 6% increase if buses are replaced, and a 89% increase if high-capacity transit is replaced.[32] These simulations are based on existing travel activity, and most transportation economists presume that some level of induced demand will be realized with fully autonomous vehicles – due in part to the increased ability of populations who currently travel less (e.g., the elderly, those unable to drive), and in part due to the potentially lower costs of travel.

Figure 13. Reasons for substituting ride-hailing for transit services



Survey question: "What would you consider the most important versus least important reason you use on-demand mobility services such as Uber or Lyft instead of public transit?"

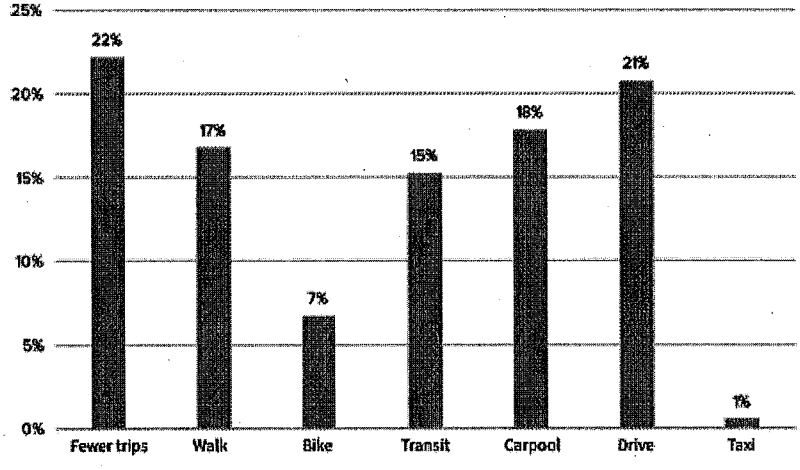
Substitution of Transit and Driving

Ride-hailing users were asked which transportation alternatives they would have used for the trips that they currently make using Uber and Lyft. Based on frequency of ride-hailing use weighted data, a majority (61%) of trips would have not been made at all, or by walking, biking, or transit. 39% of trips would have been made by car (drive alone, carpool, or taxi). Using data unweighted by frequency of ride-hailing use, 49% of ride-hailing trips were likely to have not been made at all, or by walking, biking, or transit.

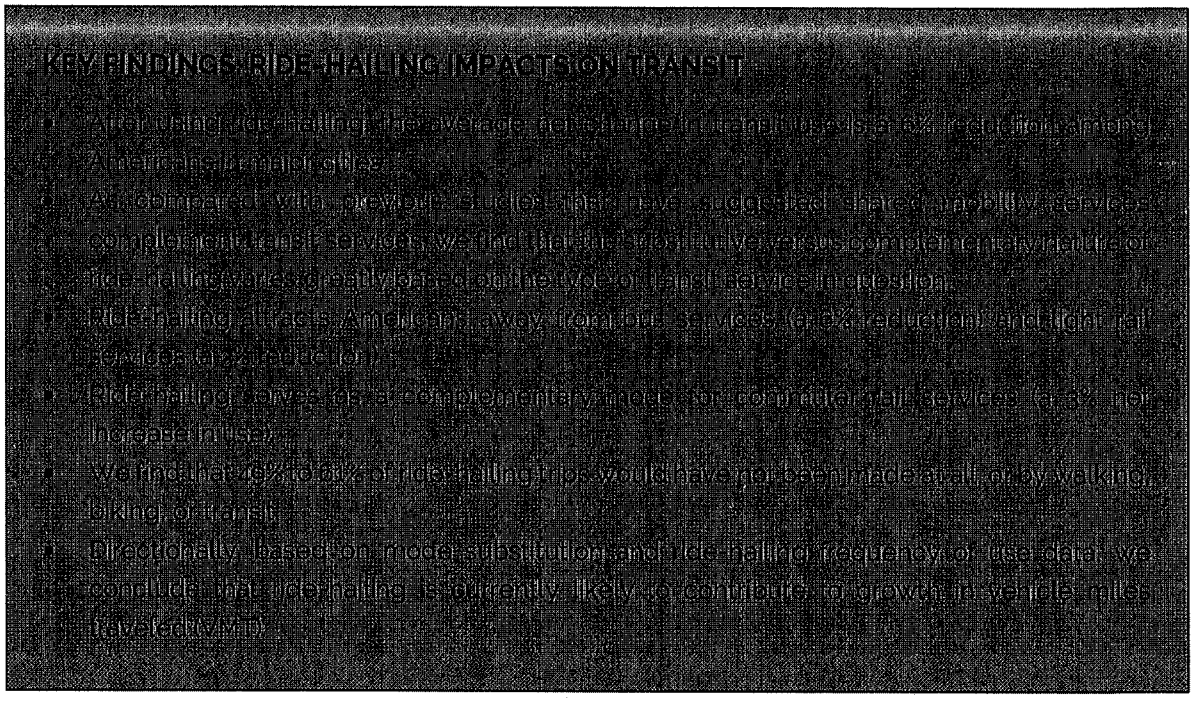
Directionally, this new evidence of mode substitution suggests that ride-hailing is likely adding vehicle miles traveled to transportation systems in major cities. The 49% to 61% of ride-hailing trips that would have not been made at all, or by walking, biking, or transit, are adding vehicles to the road. In addition, depending the volume of deadheading miles associated with ride-hailing trips (miles traveled without a passenger, which have previously estimated to be 20%[33] to 50%[34]), the VMT associated with a ride-hailing trip is potentially higher than a trip taken in a personal vehicle.

While this data provides initial insights into the travel behavior changes associated with ride-hailing, it is still limited in that it does not provide a complete picture of individual travelers' trip generating activities, the modes they used before ride-hailing services, and the potentially new patterns of behavior that have since emerged. Further research in this area is needed to help cities and transportation planners make critical policy decisions about how we allocate public space.

Figure 14. Mode substitution, weighted by frequency of ride-hailing use



Survey question: If Uber or Lyft were unavailable, which transportation alternatives would you use for the trips that you make using Uber or Lyft?


KEY FINDINGS: RIDE-HAILING IMPACTS ON TRANSIT
After ruling out ride-hailing, the average decline in transit use is 6% for cities among 20 American urban centers.
When compared with previous studies that have suggested shared mobility services complement transit services, we find that the opposite is true versus complementarity nature of ride-hailing varies greatly based on the type of transit service in question.
Ride-hailing attracts Americans away from bus services (6% reduction) and light rail services (3% reduction).
Ride-hailing serves as a complementary mode for commuter rail services (a 3% net increase in use).
We find that 6% to 21% of ride-hailing trips would have not been made at all, or by walking, biking, or transit.
Directionally, based on mode substitution and ride-hailing frequency of use data, we conclude that ride-hailing is currently likely to contribute to growth in vehicle miles traveled (VMT).

7. Conclusions and Policy Implications

Ride-hailing services have exploded in popularity around the world in a relatively short period of time, and initial evidence suggests that they capture a relatively significant share of how people travel in major cities. Looking forward towards a future with automated vehicle technology – which is estimated to accelerate adoption of these services, it is critical that transportation planners and policymakers begin to understand how "mobility as a service" models shape travel patterns. Without a clear understanding of how these services influence transportation decisions, cities will be limited in their ability to make effective mid- to long-range infrastructure and policy choices aimed at ensuring that transportation services are equitable, sustainable, and safe.

By collecting data through a representative panel in seven major U.S. metropolitan areas, this study presents initial evidence on the adoption of ride-hailing services and their potential impacts on travel behavior, including vehicle ownership, trip generation, mode substitution, and vehicle miles traveled. We caution readers that one cannot assume the travel behavior impacts associated with ride-hailing transfer to other shared modes, or vice versa. That is, the results presented here are specific to ride-hailing, and do not necessarily apply to carsharing, bikesharing, or microtransit services. Further research on a variety of topics is needed.

Key Takeaways

There is uneven adoption of ride-hailing across income classes and age groups
As anticipated, we find that ride-hailing adopters tend to be younger, more educated, and have higher incomes than the rest of the population. Educated, affluent Americans have adopted ride-hailing services at double the rate of those who make $35,000 or less a year. Similarly, those aged 18 to 29 have adopted ride-hailing at a rate of 36%, while only 4% of those 65 and older use ride-hailing. If one hopes that these services can provide mobility to an aging population or improve transportation equity, there are clearly significant adoption issues that must be addressed.

Ride-hailing is used regularly by urban Americans, less so by those in the suburbs
While 29% of the urban population surveyed have adopted ride-hailing and use them on a regular basis, only 7% of suburban Americans in major cities use them to make trips in and around their home region. Another 7% of suburban Americans utilize ride-hailing primarily when they are traveling away from home. A significant factor influencing the long-term growth of ride-hailing is whether these services can prove to be more viable in suburban America, where most the urbanized population lives.

Ride-hailing users have similar vehicle ownership rates as everyone else
Ride-hailing users who use transit have higher vehicle ownership rates than individuals who only use transit in cities: 52% personally own vehicles compared to 46%. As compared with Americans who do not use transit or shared modes, ride-hailing users have the same levels of personal vehicle ownership. This finding, based on a representative sample of Americans in cities, is contrary to previous studies based on convenience samples.

Ride-hailing users who disposed of a vehicle use ride-hailing more frequently
Although the majority of ride-hailing users (91%) have not made any decisions about vehicle ownership since they started using ride-hailing, we find that 9% have disposed of a vehicle. Reduced vehicle ownership and reduced driving are both highly correlated with increased ride-hailing use. The net vehicle miles traveled (VMT) effects are unknown and are arguably a more important metric.

Ride-hailing users report a net decrease in their transit use
Contrary to previous studies that report on ride-hailing as having a primary complementary relationship to public transit, we find mixed results depending on the type of transit service. The net effect is negative – that is, on average, respondents reduce their transit use. Bus services and light rail services experience the largest reductions in use after individuals begin using ride-hailing services (6% and 3% respectively). Respondents reported using heavy rail systems more after ride-hailing (3%). This data demonstrates that the substitutive versus complementary nature of ride-hailing varies considerably based on the prevalence and quality of public transit services.

Approximately half of ride-hailing trips are ones that would have been made by walking, biking, transit, or avoided altogether
We find that 49% to 61% of ride-hailing trips would have not been made at all, or by walking, biking, or public transit. This mode substitution data suggests that directionally ride-hailing is likely contributing more vehicle miles traveled (VMT) than it reduces in major cities. This data is consistent with recent efforts to estimate the volume of traffic in cities which are associated with ride-hailing services. It suggests that substantial policy action may be required to ensure that ride-hailing can effectively be woven into the transportation network while reducing congestion and the emissions of transportation services. Absent of these efforts, congestion and emissions appear likely to grow.

Future Research and Policy Implications

Given the rapid growth of ride-hailing in cities around the world, it is critical to begin collecting data on their potential impacts on travel behavior, including vehicle ownership, vehicle miles traveled, and mode shares. Further research is needed to understand how ride-hailing may influence future trajectories of traffic volumes and associated emissions so that cities can effectively plan for transportation infrastructure and public transit investments. Absent of data, cities and transit agencies are essentially in the dark when making important decisions that

influence how citizens move in their regions. Based on this initial evidence, there are several viable choices that are likely to lead to improved mobility in major cities, while paving the way for more informed decision-making in the future.

Pricing and/ or priority to improve the flow of high-occupancy vehicles

In the near term, policymakers need to address the issue of additional vehicle miles that ride-hailing services contribute to cities (as well as those from personally-owned vehicles)– which can further erode high-capacity transit services. Given limited road infrastructure and the expanding population of cities, it is critical that high-occupancy vehicles be prioritized on the roadways if they are carrying a sufficient number of passengers. Both congestion pricing and enforced priority lanes can serve as effective measures to ensure that scarce roadway space is used effectively.

Improving data access for cities and transportation planners

There is an increasing data gap between privatized mobility operators and those in the public sphere who make critical short-to-long range transportation planning and policy decisions. As private mobility services providers continue to rapidly expand service, they gather massive amounts of data about how people move in cities – data that for the most part, are unavailable to transportation planners. Limited data in the public sector perpetuates less-informed decision-making, which in turn results in transportation systems that do not meet the public's needs. We need a solution to this growing problem.

There are several potential solutions for bridging the data gap: 1) mandated data-sharing for mobility operators that use public infrastructure (i.e. roads); and 2) investment in more frequent data collection efforts. The New York Taxi & Limousine Commission approved regulations requiring companies like Uber and Lyft to share detailed data on rides in New York City.[35] Provided they are sufficiently anonymized, this data is essential for cities to make informed transportation planning and policy decisions, and reasonable for cities to require given mobility operators' use of public infrastructure. Similar examples of mandated data-sharing exists across the transportation sector, including data required of airlines in exchange for use of airports.

Second, while research that harnesses data from ride-hailing providers themselves may shed light on the utilization, demographics, and miles traveled of these services, the more complex decisions that individuals and households make over time require continued data collection efforts through representative samples of the population. Given the pace of innovation in the transportation sector, data collection and analysis efforts to understand travel decisions are currently insufficient.

Ride-hailing services have disrupted traditional transportation providers, including public transit agencies and automobile manufacturers. The expansion of ride-hailing has highlighted a number of opportunities for cities to harness new technologies, data, and business models that can serve a greater portion of the population more efficiently. While the introduction of ride-hailing has brought about welcome innovation in the transportation sector, further data and collaboration

are required to ensure that these services can be effectively woven into the fabric of cities such that they are sustainable, equitable, and safe.

Acknowledgements

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References

[1] Jerrem, L. (2017, July 4). "Prepare to enter the age of shared mobility." *Automotive Megatrends*. Retrieved from: https://automotivemegatrends.com/prepare-enter-age-shared-mobility/

[2] Lyft, Didi Kuaidi, GrabTaxi and Ola Form Global Rideshare Partnership. (2015, December 3). Retrieved from: http://www.prnewswire.com

[3] Schaller, B. (2017). *Unsustainable? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City*. Schaller Consulting.

[4] Millard-Ball, A. (2005). *Car-sharing: Where and how it succeeds* (Vol. 108). Transportation Research Board.

[5] Rayle, L., Shaheen, S., Chan, N., Dai, D., & Cervero, R. (2014). *App-based, on-demand ride services: Comparing taxi and ridesourcing trips and user characteristics in San Francisco University of California Transportation Center (UCTC)*. UCTC-FR-2014-08.

[6] Le Vine, S., & Polak, J. (2015). Introduction to special issue: new directions in shared-mobility research. *Transportation, 42*(3), 407-411.

[7] Cervero, R. (2003). City CarShare: First-year travel demand impacts. *Transportation Research Record: Journal of the Transportation Research Board*, (1839), 159-166.

[8] Cervero, R., & Tsai, Y. (2004). City CarShare in San Francisco, California: second-year travel demand and car ownership impacts. *Transportation Research Record: Journal of the Transportation Research Board*, (1887), 117-127.

[9] Cervero, R., Golub, A., & Nee, B. (2007). City CarShare: longer-term travel demand and car ownership impacts. *Transportation Research Record: Journal of the Transportation Research Board*, (1992), 70-80.

[10] Martin, E. W., & Shaheen, S. A. (2011). Greenhouse gas emission impacts of carsharing in North America. *IEEE Transactions on Intelligent Transportation Systems, 12*(4), 1074-1086.

[11] Clewlow, R. R. (2016). Carsharing and sustainable travel behavior: Results from the San Francisco Bay Area. *Transport Policy, 51*, 158-164.

[12] Muheim, P., & Reinhardt, E. (1999). Carsharing: the key to combined mobility. *World Transport Policy & Practice, 5(3)*.

[13] Klintman, M. (1998). *Between the Private and the Public: Formal Carsharing as Part of A Sustainable Traffic System. An Exploratory Study* (No. KFB-MEDD-1998-2).

[14] Brook, D. (2004, January). Carsharing–start up issues and new operational models. *In Transportation Research Board Annual Meeting*.

[15] Agatz, N., Erera, A., Savelsbergh, M., & Wang, X. (2012). Optimization for dynamic ride-sharing: A review. *European Journal of Operational Research, 223(2)*, 295-303.

[16] Agatz, N. A., Erera, A. L., Savelsbergh, M. W., & Wang, X. (2011). Dynamic ride-sharing: A simulation study in metro Atlanta. *Transportation Research Part B: Methodological, 45(9)*, 1450-1464.

[17] Alonso-Mora, J., Samaranayake, S., Wallar, A., Frazzoli, E., & Rus, D. (2017). On-demand high-capacity ride-sharing via dynamic trip-vehicle assignment. *Proceedings of the National Academy of Sciences*, 201611675.

[18] Pew Research Center, May, 2016, "Shared, Collaborative and On Demand: The New Digital Economy."

[19] Firnkorn, J., & Müller, M. (2012). Selling mobility instead of cars: new business strategies of automakers and the impact on private vehicle holding. *Business Strategy and the Environment, 21(4)*, 264-280.

[20] Stillwater, T., Mokhtarian, P. L., & Shaheen, S. A. (2009). Carsharing and the built environment. *Transportation Research Record: Journal of the Transportation Research Board, 2110(1)*, 27-34.

[21] Porter, C.D.; Brown, A.; Dunphy, R.T.; Vimmerstedt, L. (March 2013). Effects of the Built Environment on Transportation: Energy Use, Greenhouse Gas Emissions, and Other Factors. *Transportation Energy Futures Series*. Prepared by the National Renewable Energy Laboratory (Golden, CO) and Cambridge Systematics, Inc. (Cambridge, MA), for the U.S. Department of Energy, Washington, DC. DOE/GO-102013-3703. 91 pp.

[22] Murphy, C. (2016). *Shared mobility and the transformation of public transit* (No. TCRP J-11/TASK 21).

[23] Hampshire, R. C., Simek, C., Fabusuyi, T., Di, X., & Chen, X. (2017). Measuring the Impact of an Unanticipated Suspension of Ride-Sourcing in Austin, Texas.

[24] Henao, A. (2017). *Impacts of Ridesourcing-Lyft and Uber-on Transportation Including VMT, Mode Replacement, Parking, and Travel Behavior* (Doctoral dissertation, University of Colorado at Denver).

[25] Jenn. A., Laberteaux, K., & Clewlow, R. R. (2017). New mobility services and vehicle electrification. *Manuscript submitted for publication.*

[26] Clewlow et al. (2017). Urban Travel and Residential Choices Across Generations: Results from a North American Survey. *Manuscript submitted for publication.*

[27] Mothers Against Drunk Driving. (2015, January 27). New Report from MADD, Uber Reveals Ridesharing Services Important Innovation to Reduce Drunk Driving. Retrieved from: http://www.madd.org/

[28] Greenwood, B. N., & Wattal, S. Show Me the Way to Go Home: An Empirical Investigation of Ride Sharing and Alcohol Related Motor Vehicle Homicide (January 29, 2015). *Fox School of Business Research Paper*, (15-054).

[29] Shoup, D. C. (2005). *The high cost of free parking* (Vol. 206). Chicago: Planners Press.

[30] Willson, R. W. (1995). Suburban parking requirements: a tacit policy for automobile use and sprawl. *Journal of the American Planning Association, 61*(1), 29-42.

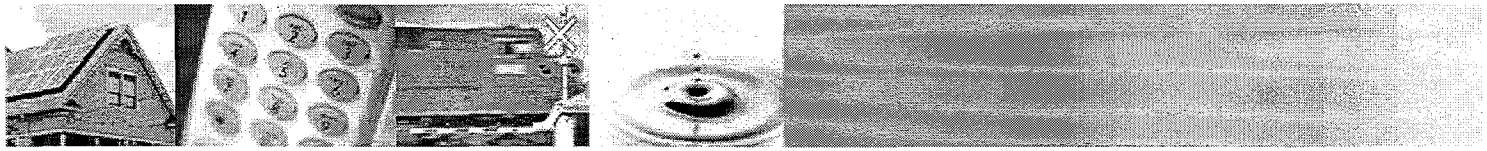
[31] Roberts, A. (2017, July 14). Car-Sharing Companies Hit Speed Bumps as Demand Slows, Ride-Hailing Grows. *The Wall Street Journal.* Retrieved from: https://www.wsj.com

[32] International Transport Forum (ITF). (2015). *Urban Mobility System Upgrade: How shared self-driving cars could change city traffic.* Retrieved from: http://www.internationaltransportforum.org

[33] San Francisco County Transportation Authority (SFCTA). (2017). *TNCs Today: A Profile of San Francisco Transportation Network Company Activity*. Retrieved from: http://www.sfcta.org

[34] Cramer, J., & Krueger, A. B. (2016). Disruptive change in the taxi business: The case of Uber. *The American Economic Review*, *106*(5), 177-182.

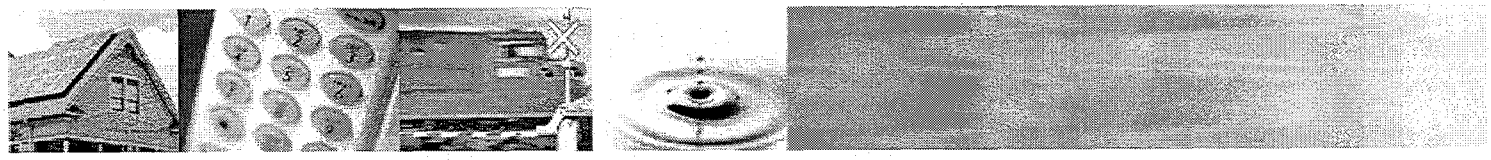
[35] Morris, D. Z. (2017, February 5). New York City Says Uber Must Share Ride Data. *Fortune*. Retrieved from: http://www.fortune.com



Summary of Transportation Network Companies' Annual Reports 2014 and 2015 submissions

Safety and Enforcement Division

Transportation Enforcement Branch



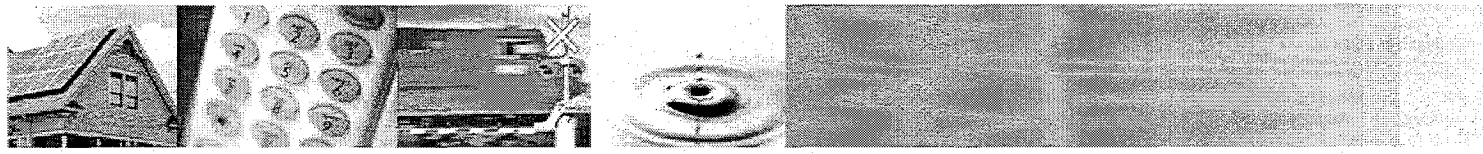
TNC Reporting Requirements

Decision 13-09-045 requires transportation network companies (TNCs) to submit reports regarding accessibility, ride details, zero tolerance complaints and collisions, and miles and hours spent driving.

- Due on September 19 each year
- Reporting period: September 1 to August 31
- TNCs that submitted reports for each reporting period

2013-2014	2014-2015
Rasier-CA, LLC	Rasier-CA, LLC
Lyft	Lyft
Sidecar	Sidecar
Summon	Summon
Wingz	Wingz
	Shuddle

- Summary charts show aggregate numbers only (i.e., not company-specific)



TNC Reporting Requirements

Decision 13-09-045 requires TNCs to report the following:

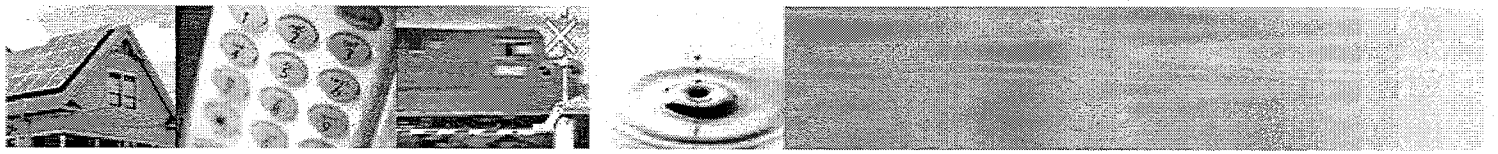
- Safety Requirement f: number of drivers that completed the TNC's driver training course

- Regulatory Requirement g: number and percentage of customers who requested accessible vehicles, and how often the TNC was able to comply with those requests.

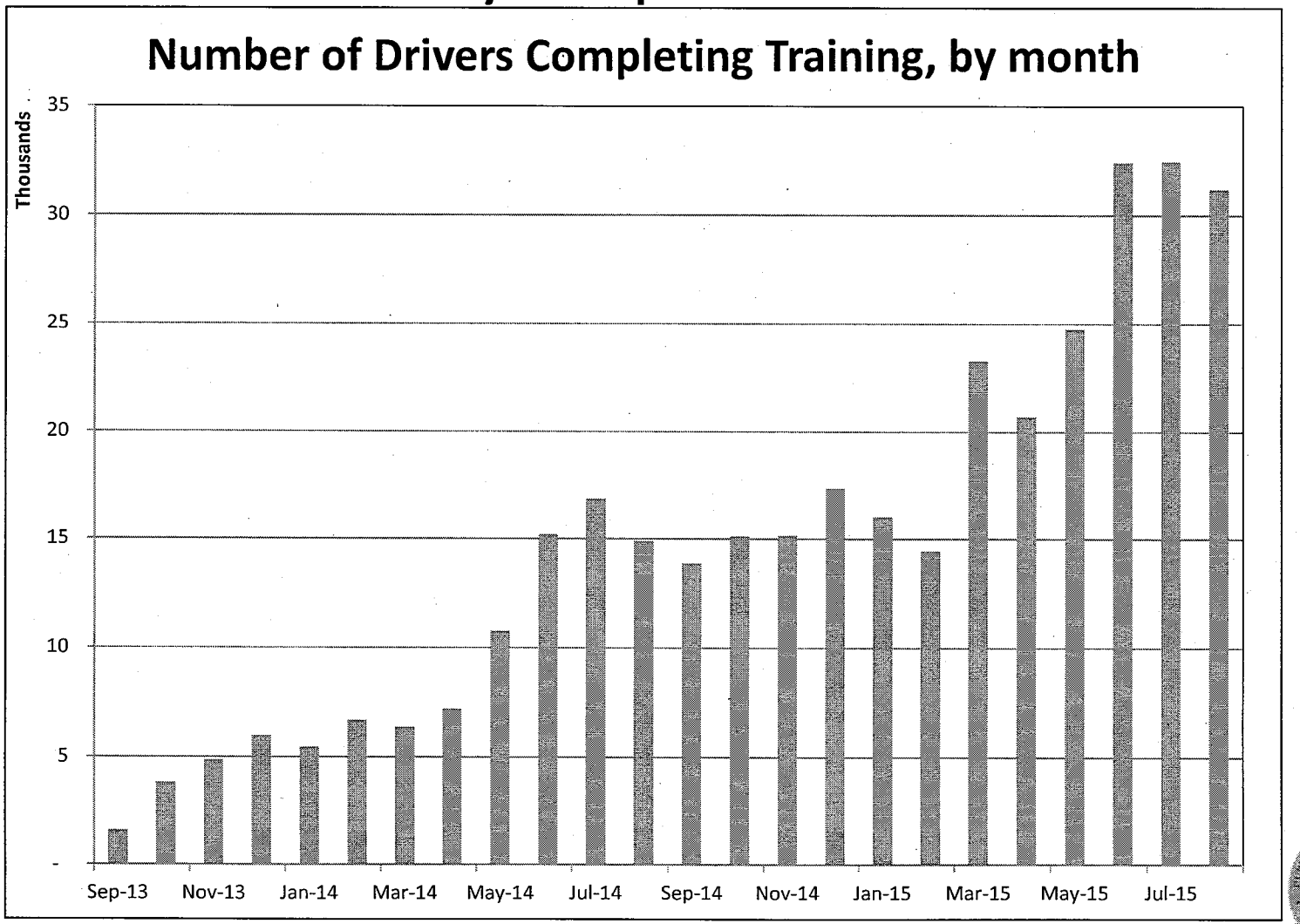
- Regulatory Requirement j:
  - –date, time, and zip code of each request and the concomitant date, time, and zip code of each ride that was subsequently accepted or not accepted
  - –zip code of where the ride began, a column where the ride ended, the miles travelled, and the amount paid/donated

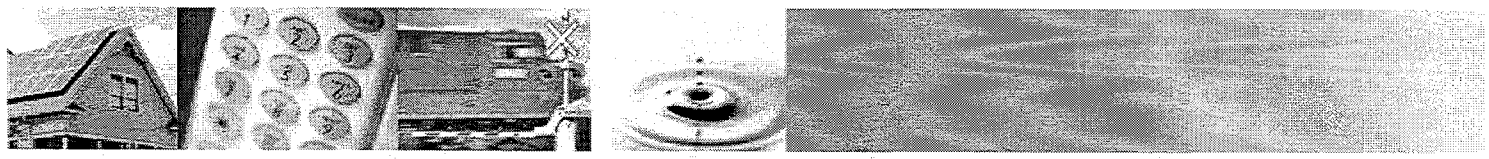
- Regulatory Requirement k:
  - –number of drivers that were found to have committed a violation and/or suspended, including a list of zero tolerance complaints and the outcome of the investigation into those complaints
  - –For each accident or other incident that involved a TNC driver and was reported to the TNC: date and time of the incident, cause of the incident, and the amount paid, if any, for compensation to any party in each incident, by the driver's insurance, the TNC's insurance, or any other source.

- Regulatory Requirement l: average and mean number of hours and miles each TNC driver spent driving for the TNC.

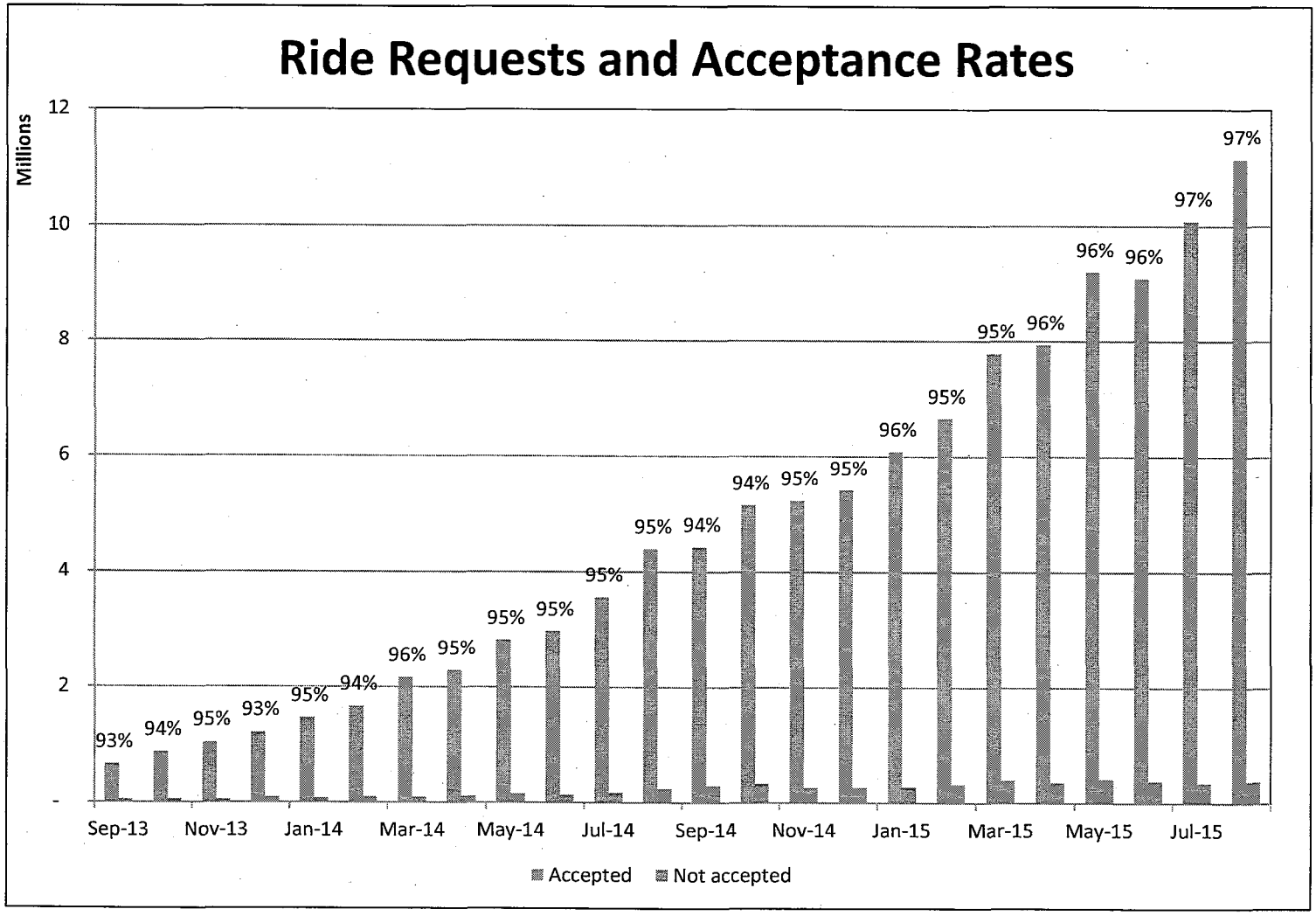


Safety Requirement f





Regulatory Requirement j



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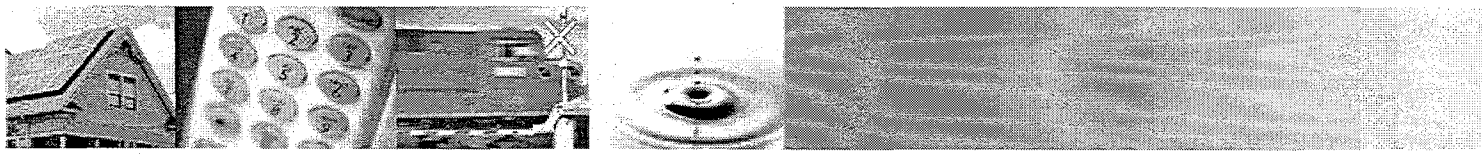

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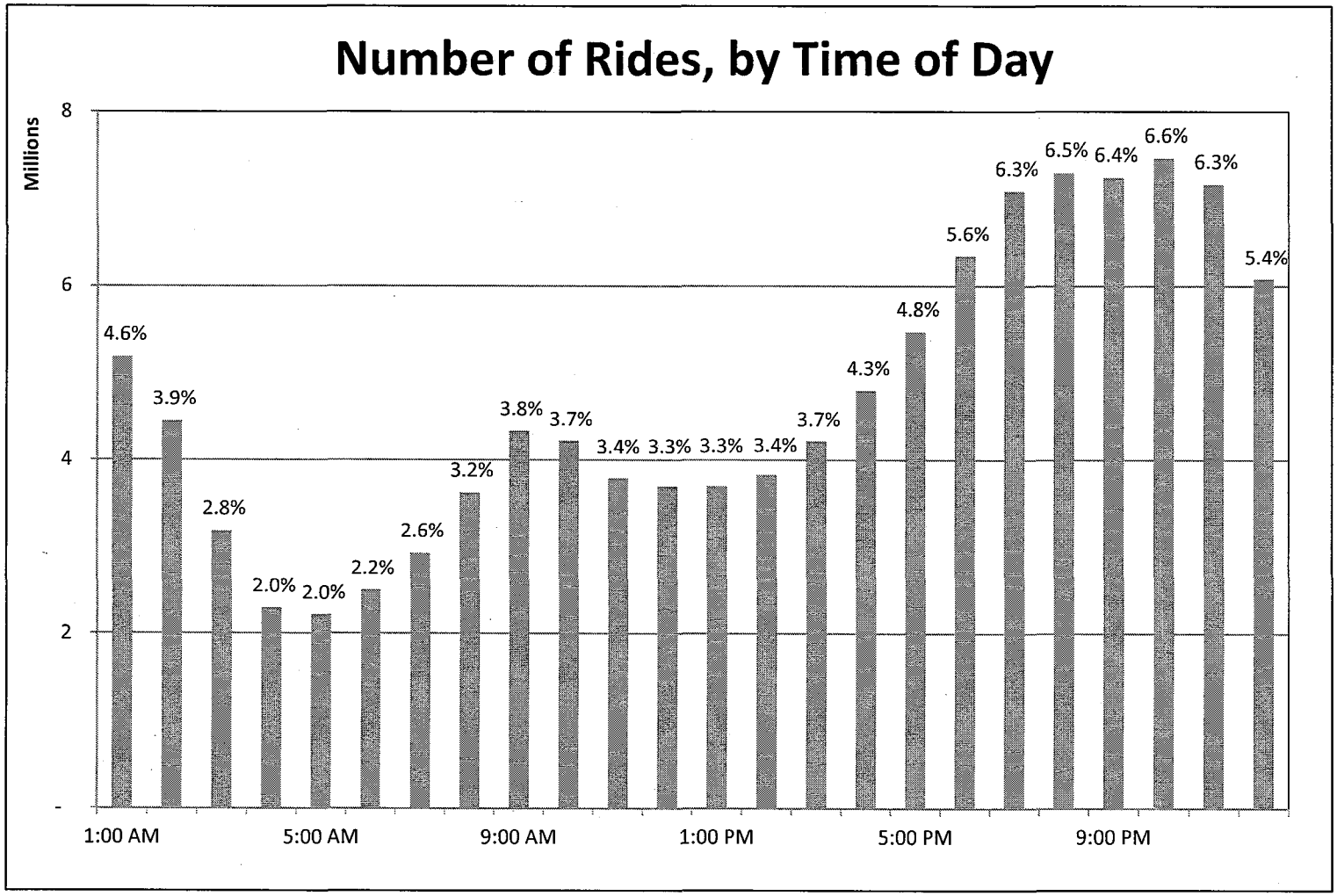

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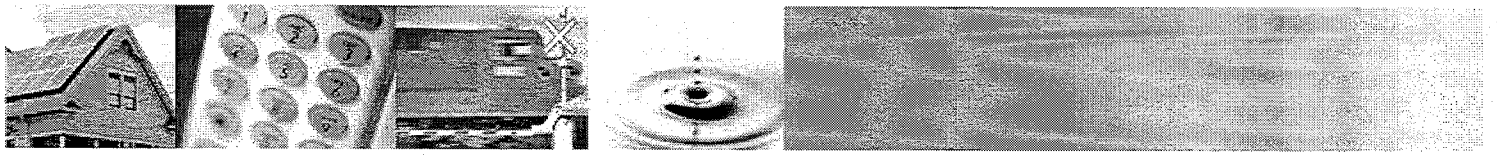

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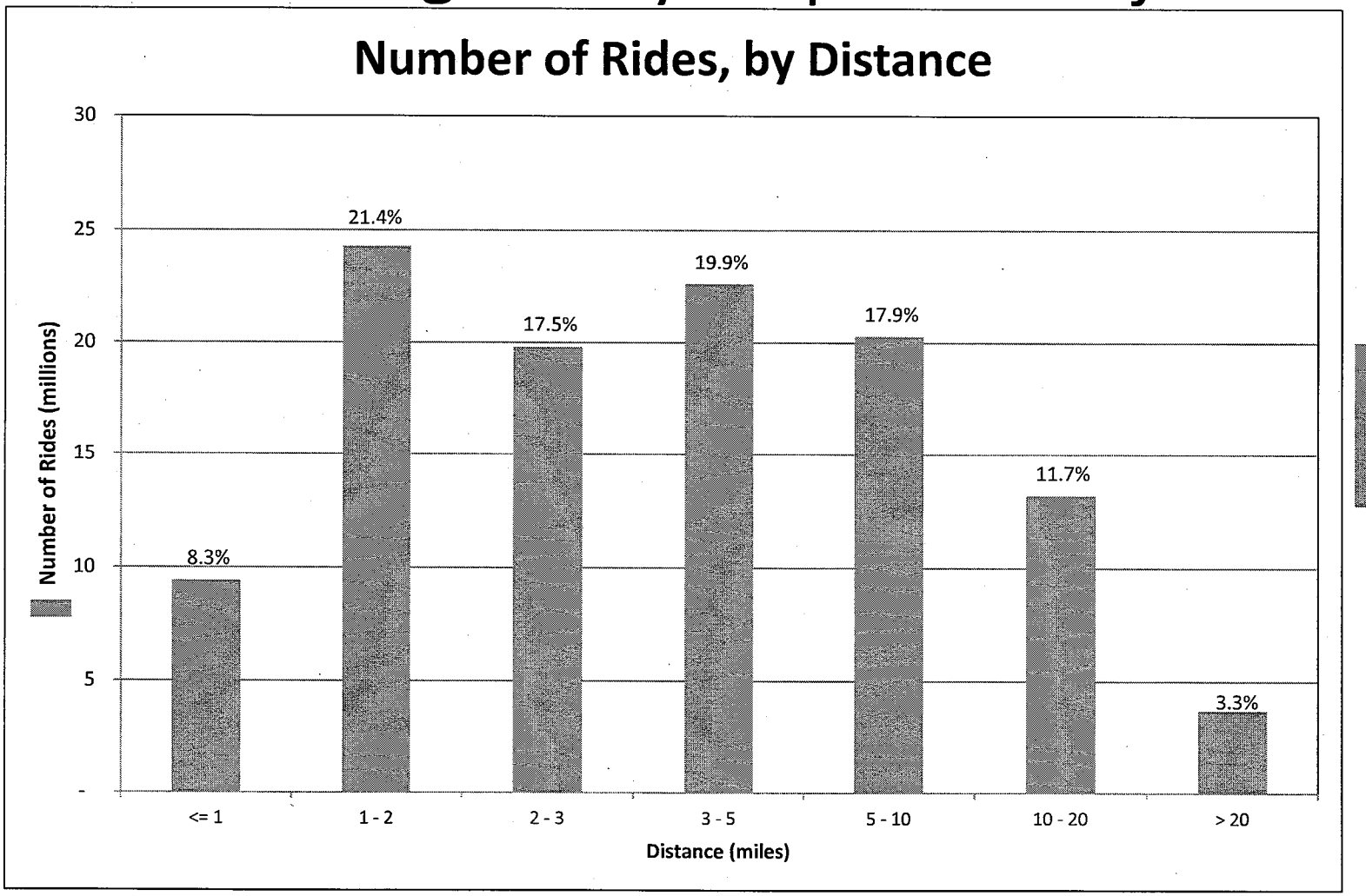

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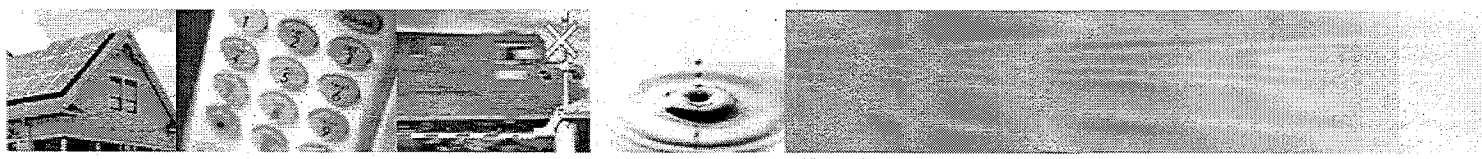

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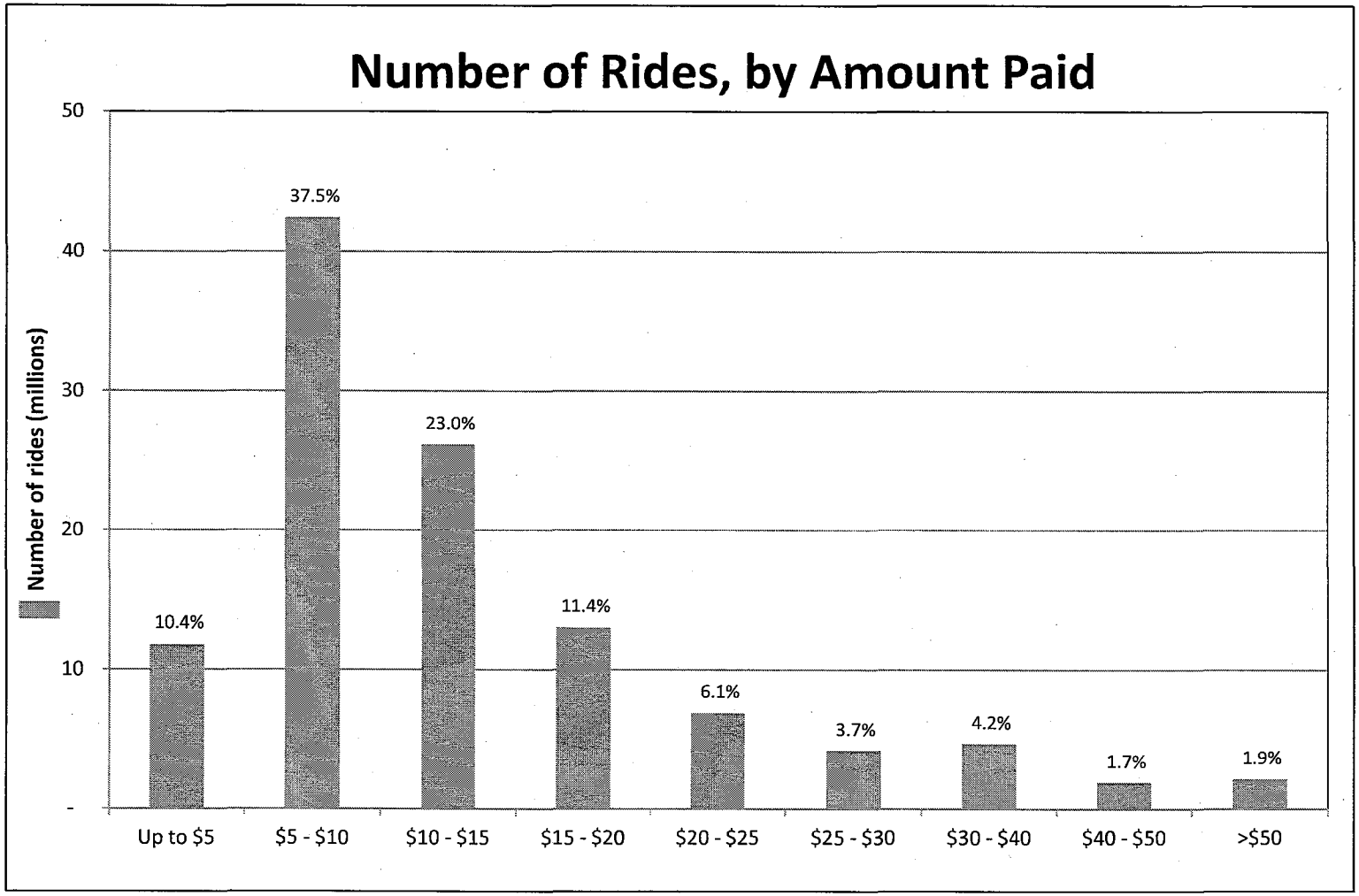

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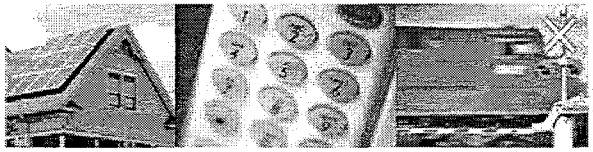
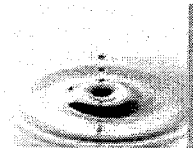
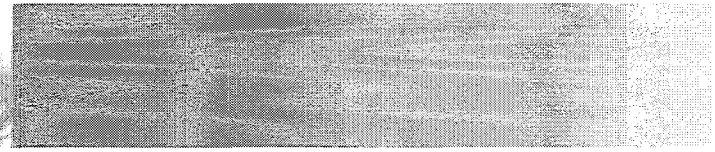




Regulatory Requirement j
Comparing acceptance rates by day & time*

requests originating from 94124 (San Francisco - Bayview)

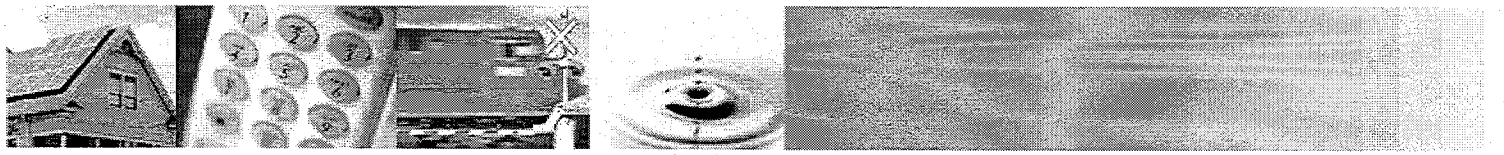
	1 am	2	3	4	5	6	7	8	9	10	11	12 pm	13	14	15	16	17	18	19	20	21	22	23	12 am	Avg.
Sunday	71%	73%	69%	82%	83%	94%	95%	88%	92%	93%	89%	91%	91%	95%	92%	86%	80%	90%	90%	90%	91%	89%	88%	82%	87%
Monday	79%	85%	88%	86%	95%	94%	91%	95%	95%	94%	93%	94%	94%	93%	89%	95%	94%	91%	94%	92%	94%	90%	90%	88%	93%
Tuesday	65%	73%	74%	87%	89%	97%	94%	91%	95%	96%	97%	93%	96%	95%	95%	95%	91%	94%	96%	91%	70%	90%	92%	79%	91%
Wednesday	80%	69%	91%	77%	94%	100%	93%	92%	94%	97%	95%	94%	90%	95%	93%	98%	97%	93%	95%	95%	91%	94%	88%	82%	93%
Thursday	71%	85%	87%	70%	90%	92%	94%	94%	95%	94%	95%	94%	96%	97%	91%	97%	96%	91%	94%	95%	90%	89%	72%	96%	92%
Friday	71%	66%	88%	92%	86%	94%	97%	93%	90%	96%	94%	96%	93%	95%	92%	94%	92%	92%	94%	94%	93%	87%	89%	68%	91%
Saturday	77%	71%	77%	91%	89%	91%	95%	92%	93%	89%	93%	90%	88%	91%	94%	89%	91%	91%	92%	93%	92%	86%	80%	84%	89%
Average	74%	73%	78%	83%	89%	94%	94%	92%	93%	94%	94%	93%	92%	94%	92%	93%	91%	92%	93%	93%	88%	88%	84%	80%	91%

requests originating from 94080 (South San Francisco)

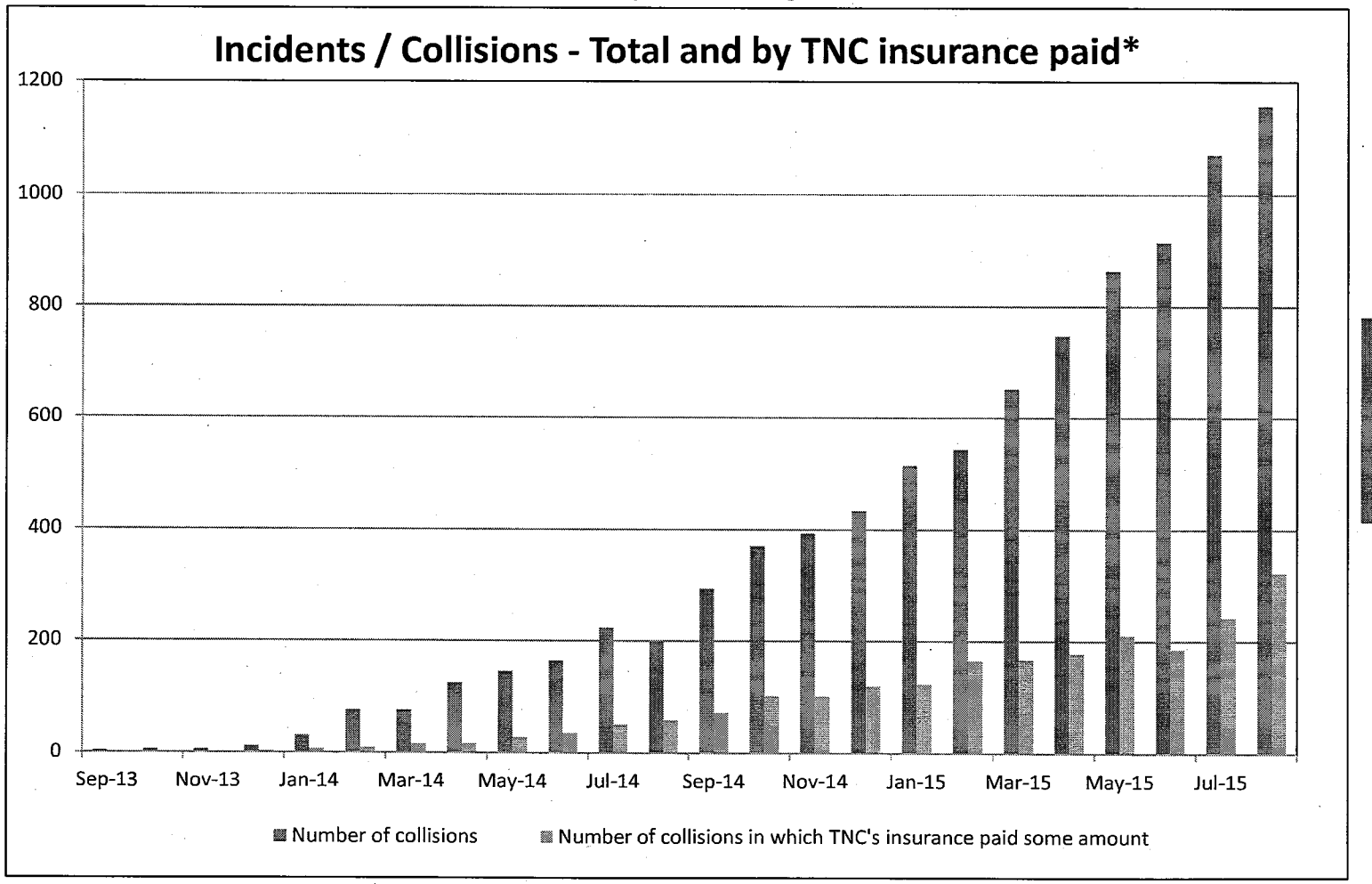
	1 am	2	3	4	5	6	7	8	9	10	11	12 pm	13	14	15	16	17	18	19	20	21	22	23	12 am	Avg.
Sunday	83%	79%	79%	92%	87%	94%	98%	100%	93%	94%	94%	85%	95%	94%	90%	88%	86%	97%	90%	85%	93%	91%	84%	79%	90%
Monday	94%	93%	89%	91%	100%	96%	96%	92%	93%	96%	95%	96%	96%	97%	96%	95%	91%	97%	95%	92%	94%	93%	90%	85%	94%
Tuesday	78%	75%	67%	95%	100%	96%	97%	95%	96%	96%	98%	96%	93%	96%	99%	97%	95%	96%	92%	96%	95%	88%	91%	91%	95%
Wednesday	67%	68%	82%	88%	84%	94%	96%	94%	98%	96%	96%	98%	93%	97%	96%	96%	96%	96%	93%	96%	91%	86%	86%	85%	94%
Thursday	78%	70%	93%	96%	86%	97%	95%	95%	96%	98%	96%	95%	96%	97%	97%	92%	95%	96%	96%	96%	94%	91%	98%	88%	95%
Friday	79%	91%	87%	95%	97%	93%	94%	95%	91%	97%	98%	96%	96%	96%	93%	95%	97%	93%	92%	94%	98%	91%	86%	83%	94%
Saturday	89%	81%	84%	95%	95%	95%	83%	93%	94%	95%	96%	88%	90%	90%	91%	92%	94%	92%	95%	95%	91%	89%	85%	81%	91%
Average	83%	80%	82%	93%	92%	95%	94%	95%	94%	96%	96%	94%	95%	96%	95%	94%	94%	95%	93%	94%	94%	90%	88%	83%	94%

lowest — highest

*Based on 2014 submissions; analysis of 2015 submissions is ongoing



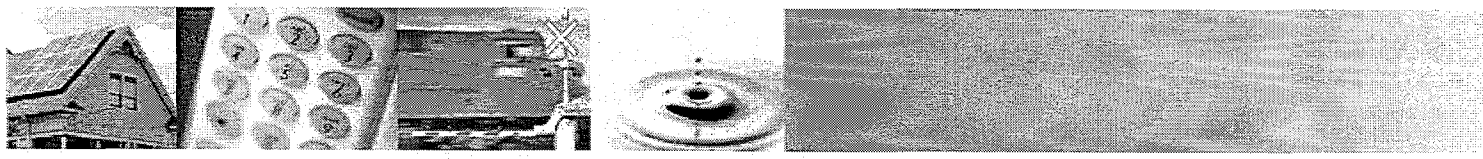
Regulatory Requirement k



Average amount paid per incident: $6500

*Includes pending cases

NOTE: The CPUC does not collect comparable data for passenger stage corporations or non-TNC charter-party carriers



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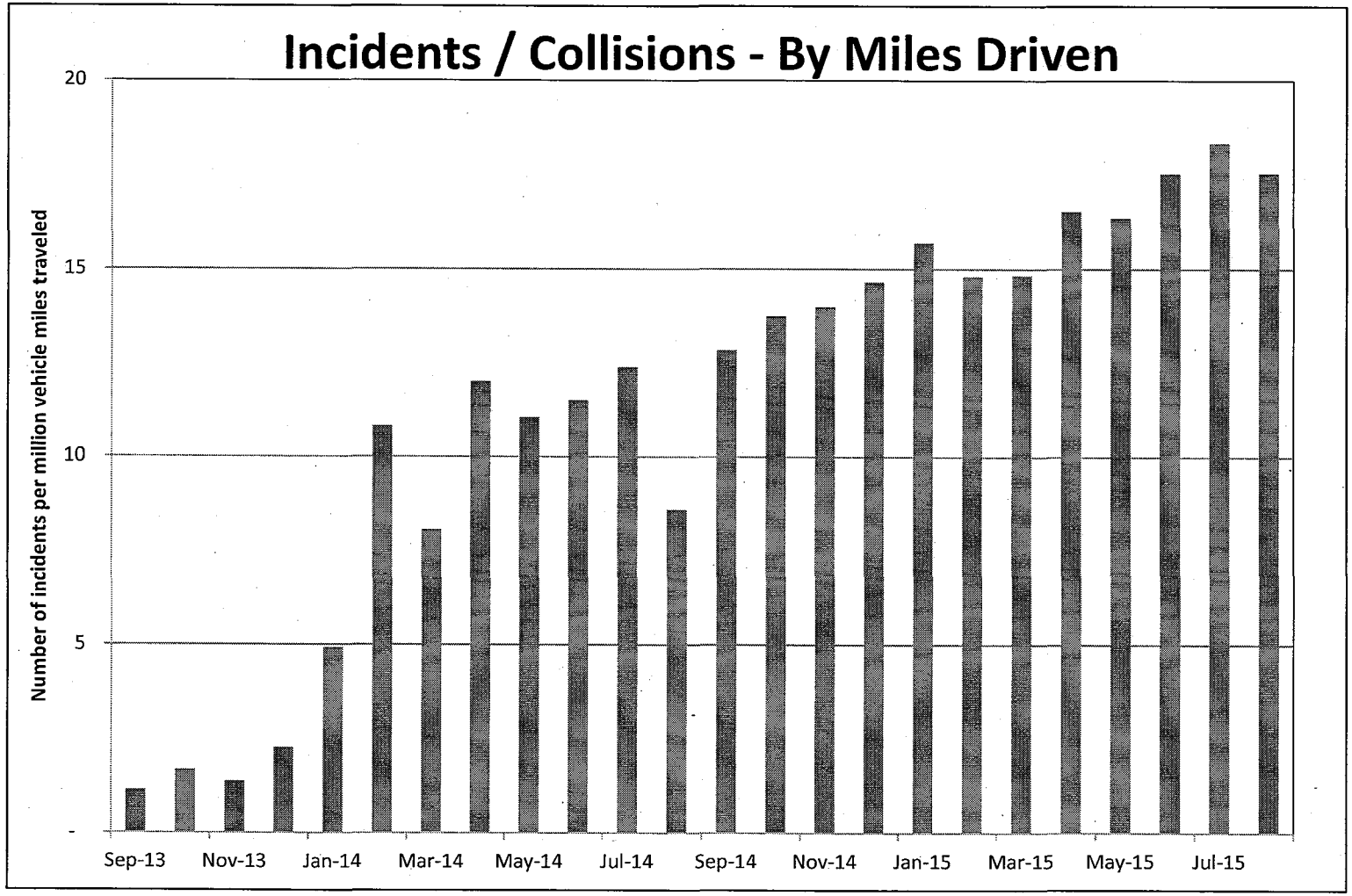
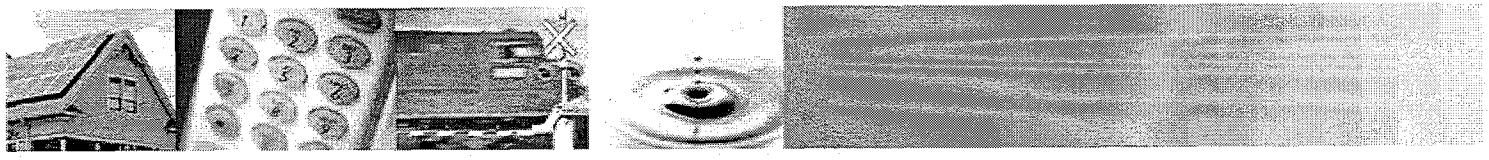


NOTE: The CPUC does not collect comparable data for passenger stage corporations or non-TNC charter-party carriers



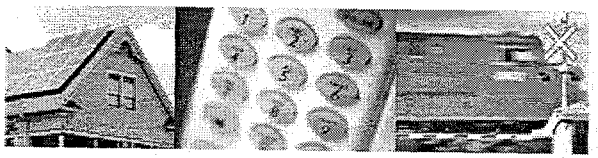
Details From Incident / Collision Reports

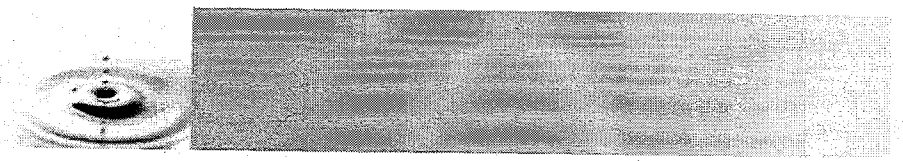
Most incidents / collisions: rear-end, sideswipe, other minor incidents

Incidents involving passengers and/or pedestrians:

passenger opened door into traffic	>300
- bicyclist (motorcyclist, skateboarder, scooter included) ran into open door (subset of "passenger opened door into traffic")	~90
"struck" or "made contact with" or "involving" a pedestrian or bicyclist	>200
"rolled" over passenger's foot	>100

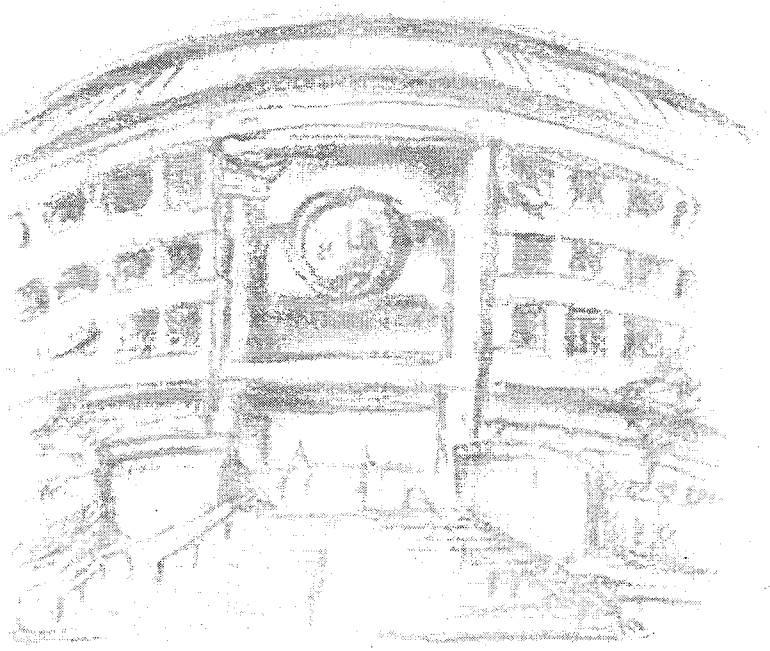
NOTE: The CPUC does not collect comparable data for passenger stage corporations or non-TNC charter-party carriers





For additional information:
www.cpuc.ca.gov/tmis
www.cpuc.ca.gov/MoveAndRide

Passenger complaint hotline:
1-800-366-4782



San Francisco County Transportation Authority

PLAN. FUND. DELIVER.

EMERGING MOBILITY | TNCS TODAY REPORT

HOME (//WWW.SFCTA.ORG/EMERGING-MOBILITY)

EMERGING MOBILITY STUDIES (//WWW.SFCTA.ORG/EMERGING-MOBILITY/STUDIES)

FAQS (//WWW.SFCTA.ORG/EMERGING-MOBILITY/FAQ)

RIDE-HAIL/TNC STUDIES (//WWW.SFCTA.ORG/EMERGING-MOBILITY/RIDE-HAIL-COMPANIES)

OVERVIEW AND KEY FINDINGS

"TNCs Today: A Profile of San Francisco Transportation Network Company Activity" provides the first comprehensive estimates of Uber and Lyft activity in the city.

Key findings of the report, which focused only on Transportation Network Company trips made entirely within San Francisco, include:

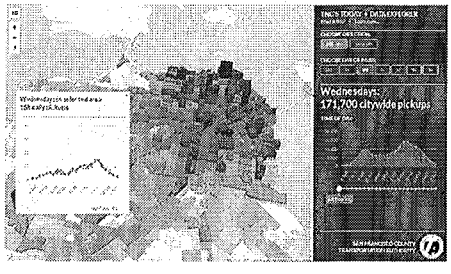
- On a typical weekday, TNCs make more than 170,000 vehicle trips within San Francisco, approximately 12 times the number of taxi trips, representing 15% of all intra-San Francisco vehicle trips.
- TNC trips are concentrated in the densest and most congested parts of San Francisco, including the downtown and northeastern core of the city. At peak periods, TNCs are estimated to comprise 20-26% of vehicle trips in Downtown areas and the South of Market. At the other end of the range, TNCs comprise 2%-4% of peak vehicle trips in the southern and western part of the city.
- On an average weekday, more than 5,700 TNC vehicles operate on San Francisco streets during the peak period. On Fridays, over 6,500 TNC vehicles are on the street at the peak.
- TNCs drive approximately 570,000 vehicle miles within San Francisco on a typical weekday. This accounts for 20% of all local daily vehicle miles traveled (VMT) and includes both in-service and out-of-service mileage. Taken over total weekday VMT, which includes regional trips, local TNC trips account for an estimated 6.5% of total weekday vehicle miles traveled.
- TNCs provide broader geographic coverage than taxis, though there appear to be lower levels of both types of trips in the south and southeast part of the city.

RESOURCES

- Download a copy of "TNCs Today: A Profile of San Francisco Transportation Network Company Activity. (//www.sfcta.org/sites/default/files/content/Planning/TNCs/TNCs_Today_112917.pdf)"
- Download a copy of the TNCs Today fact sheet (//www.sfcta.org/sites/default/files/content/Planning/TNCs/TNCs_Today_Fact_Sheet_112117.pdf).
- Download a copy of the press release (//www.sfcta.org/sites/default/files/content/Executive/Press/2017/SFCTA%20Press_release_SFCTA%20releases%20TNCs%20Today%20report%2006.13.17.pdf).

DYNAMIC MAP

(http://tncstoday.sfcta.org)Explore a dynamic map of TNC activity in San Francisco (http://tncstoday.sfcta.org), by time of day and day of the week.



DATA FILES

- Download a data file of TNC pickup/dropoff by Travel Analysis Zone (//www.sfcta.org/sites/default/files/content/Planning/TNCs/trip_stats_taz.csv) (Excel).
- Download the shapefile for the San Francisco Travel Analysis Zones (//www.sfcta.org/sites/default/files/content/Planning/TNCs/TAZ981.zip).

FAQ

See the report's FAQ page (//www.sfcta.org/tncstoday/faq).

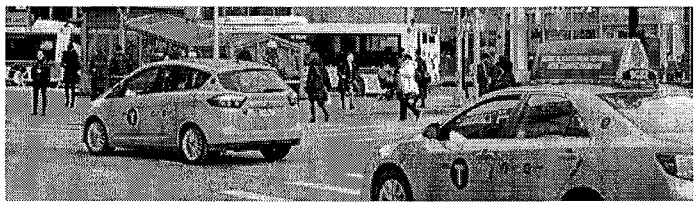
FUTURE TNC STUDIES

Subsequent reports will address important analytic and policy questions regarding TNC activity in San Francisco. These future studies will assess TNC policies, best practices, and a range of topics that reflect citywide goals including: safety, transit ridership and performance, congestion and air quality, disabled access and equity, and land use and curb management.

CONNECT WITH US

If you have questions about "TNCs Today," or are interested in a research collaboration, please contact Joe Castiglione, Deputy Director for Technology, Data and Analysis via email (//www.sfcta.org/user/847/contact) or Drew Cooper, Planner, via email (//www.sfcta.org/user/454/contact).

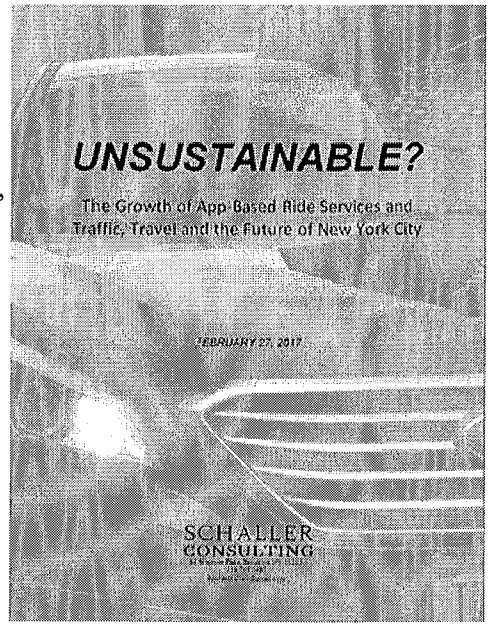
Schaller Consulting



UNSUSTAINABLE?

The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City

Over the last four years, Uber, Lyft and other app-based ride services have put 50,000 vehicles on the streets of New York City. Customers embraced these new services as offering a prompt, reliable and affordable option for traveling around town. Their growth also raises questions about their impact on traffic congestion and on public transit and taxi services that are essential components of urban transportation networks. A dearth of factual information has made it difficult, however, to assess their role in the city's transportation network or decide whether a public policy is needed.



This report presents a detailed analysis of the growth of app-based ride services in New York City, their impacts on traffic, travel patterns and vehicle mileage, and implications for achieving critical City goals for mobility, economic growth and environmental sustainability in New York and other major cities.

Findings are based on trip and mileage data that are uniquely available in New York City, providing the most detailed and comprehensive assessment of these new services in any U.S. city.

- Report Overview
- Full report (pdf file)

Related reports:

- Making Congestion Pricing Work for Traffic and Transit in NYC
- Empty Seats, Full Streets: Fixing Manhattan's Traffic Problem
- The Road to Shared Autonomous Vehicles
- Unfinished Business: A Blueprint for Uber, Lyft and Taxi Regulation
- Private Mobility, Public Interest: How public agencies can work with emerging mobility service providers

Follow @Bruce_Schaller

Press coverage

- Turns out, Uber is Clogging the Streets
  New York Daily News Op-ed, Feb. 27, 2017
  Uber promised to take "1 million cars off the road in New York City." Today in New York, we finally have the data to see how these promises are working out.

- Uber, Uber everywhere: It's time to reckon with the ride-for-hire company's explosive growth in the city
  Daily News Editorial, Feb. 4, 2017
  Onetime upstart Uber is now the dominant force on the city's roads, requiring Mayor de Blasio — who, once

bitten, is twice shy about confronting the car-hailing giant — to revisit the company's impact on and its obligations to the city.

- Subway Ridership Declines in New York. Is Uber to Blame?
  New York Times, Feb. 23, 2017
  "The secret to success in New York City over the last 20 years is the transit system's ability to absorb the growth in travel from population and economic growth," said Bruce Schaller, a former senior official at the city's Transportation Department. "If all that growth translated into more use of private cars or taxis and Ubers, it's not a sustainable way to grow the city."

- The Downside of Ride-Hailing: More New York City Gridlock
  New York Times, Feb. 7, 2017
  Subway service must become more competitive because it is unsustainable for the city to grow by adding more vehicles, said Bruce Schaller, a former senior transportation official for the city who prepared the report on ride-hailing services. "This is a wake-up call that action is needed now to deal with delays, crowding and a host of problems that people experience every day on the transit system," he said.

- Self-Driving Cars Can't Cure Traffic, but Economics Can
  New York Times, Feb. 8, 2017
  The only thing that really drives down travel times is pricing.

- Stop Asking Whether Uber Is Transit's Enemy
  CityLab, Feb. 28, 2017
  Maybe it's time to stop asking whether Uber/Lyft are "good" or "bad" for transit, walking, and biking. Time to ask, instead, how well they they serve a city's vision for how it wants to move.

- Uber Is Making Gridlock Worse
  Streetsblog, Feb. 27, 2017
  This report will be widely read and carefully studied. It touches on virtually every consequential transportation trend and policy question facing the five boroughs and stands as the most thoughtful and thorough analysis of New York City traffic and transportation issues since the Bloomberg years.

Report Overview

As Uber and Lyft expanded to cities across the country, they promised benefits to all. Passengers would get a quick, convenient alternative to the hide-bound taxi industry. Shared rides would replace solo drivers, reducing congestion. Uber promised to take "1 million cars off the road in New York City and help eliminate our city's congestion problem for good." Lyft promised reductions in carbon footprint from people driving alone.

Customers embraced the new on-demand services, saying they saved time, reduced stress and offered affordable fares. But with over 50,000 on-demand ride service vehicles now on New York City streets, it's a good time to take a look at the explosive growth of these new companies, also called Transportation Network Companies (TNCs), and their impact on critical City goals for mobility, economic growth and environmental sustainability.

In most of the country, this question is hard to answer because these privately held companies closely guard data on their operations. Uniquely in New York City, because TNCs are required to submit trip records and mileage data is available from mandated vehicle inspections, we finally have the data to see how these promises are working out.

What do these data show?

- Initially, on-demand companies grew mostly by attracting yellow cab passengers. A January 2016 report from Mayor de Blasio, which I helped prepare, concluded that the growing number of Uber and Lyft trips was not the primary cause of worsening congestion in the Manhattan Central Business District.
- Since June 2015, however, TNC passenger volumes have tripled, to 500,000 riders per day. TNC growth far outpaced the drop in yellow cab rides, leading to large additions in overall taxi/for-hire ride volumes.
- As a result of growing trip volumes, TNCs added 600 million miles of driving to city streets in 2016 — more than total yellow cab mileage in Manhattan.
- Most of the added driving is in Manhattan and congested parts of Brooklyn and Queens near the East River, where streets have the least ability to accommodate additional traffic. TNCs added an estimated 7 percent to existing miles driven by all vehicles in these congested areas from 2013 to 2016.
- Since mid-2015 TNCs have offered and heavily promoted "pooled" options such as UberPool and LyftLine. TNC mileage nonetheless continued to grow rapidly because exclusive-ride trips still predominate, and because most TNC customers are coming from transit, walking and biking. Migration from these modes translates to increased mileage even if TNC rides are shared.

The growth of on-demand ride services is also working to undercut the essential role of mass transit in absorbing growth in residents, workers and visitors. In the two decades before the arrival of TNCs, transit served the growth in travel from new residents and workers throughout the city. That meant the city could grow sustainably -- without adding to congestion, slowing commerce, diluting air quality or adding to greenhouse gas emissions.

Since 2013, however, this picture has changed. TNC ridership growth has accelerated at the same time that subway and bus ridership began to decline. As a result, TNCs are now the leading source of growth in non-auto (i.e., non-personal car) travel in New York City.

A continuation of TNC-led growth in travel is not sustainable for a growing New York. Adding TNC mileage to already-congested streets will lead to mounting costs for businesses and consumers from increasing traffic delay and hinder progress toward the City's goals for mobility, economic growth and the environment.

The central task for public policy is to shift growth back to sustainable, high-capacity modes, ranging from bus to subway to biking, while at the same time maintaining the mobility improvements that TNCs offer.

The report discusses how city and transit officials can make buses and subways a competitive choice when up against the deep-pocketed, nimble and aggressively customer-focused TNCs. These include short-term initiatives such as count-down clocks, bus lanes and traffic signal retiming and major capital projects such as installation of new subway signal systems. The report also discusses the inevitable need for road pricing as TNC fare reductions begin to erase longstanding financial disincentives for traveling by motor vehicle in congested areas of the city.

These initiatives are urgently important to head off continued shift of travel from transit to TNCs, and are far more critical than headline-grabbing but low-ridership distractions like the LaGuardia AirTrain and BQX streetcar.

The report also lays out implications for other large cities that have experienced rapid growth in on-demand ride services. The findings show how the growth of on-demand services are becoming central to changes in how people travel within dense urban areas, the effects on travel and transit, and the need for a strong data-driven public policy response that incorporates street management, transit services and road pricing.

Additional Highlights

- TNC ridership doubled annually over the last three years to 133 million passengers in 2016, and is now approaching yellow cab ridership levels.
- After accounting for declines in yellow cab, black car and car service ridership, TNCs have generated net increases of 31 million trips and 52 million passengers since 2013.
- Total mileage of TNCs, yellow cabs, black cars and car services combined increased from 14 percent to 19 percent of total citywide mileage from 2013 to 2016. (The industry mileage includes transportation of passengers, "dead-head" miles between dropping off one passenger and picking up the next passenger, and drivers' personal use of driver-owned vehicles.)
- The rate of growth in combined taxi/TNC trips in the Manhattan core accelerated in 2016.
- Trip growth in Manhattan has been concentrated during the morning and evening peak periods, when yellow cab shift changes produced a shortage of cab availability, and late evenings and weekends when passengers may prefer the comfort and convenience of TNCs over yellow cabs or transit services.

Download full report (pdf file)

Home | Press | Publications | Taxi & App-Based Ride Services

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INTRODUCED BY COUNCILMEMBER KAPLAN

CITY ATTORNEY

DRAFT

OAKLAND CITY COUNCIL

RESOLUTION NO. _____C.M.S.

A RESOLUTION ON THE CITY COUNCIL'S OWN MOTION SUBMITTING TO THE VOTERS AT THE STATEWIDE GENERAL ELECTION ON NOVEMBER 6, 2018, A PROPOSED ORDINANCE TO IMPOSE A GENERAL 50 CENT PER RIDE TAX ON PASSENGERS OF TRANSPORTATION NETWORK COMPANIES; AND DIRECTING THE CITY CLERK TO TAKE ANY AND ALL ACTIONS NECESSARY UNDER LAW TO PREPARE FOR AND CONDUCT THE NOVEMBER 6, 2018 STATEWIDE GENERAL ELECTION.

WHEREAS, Transportation Network Company (TNC) trips use the public infrastructure of the City of Oakland, including our streets; and

WHEREAS, Maintaining our streets, sidewalks, and pedestrian crossings is costly, and important to the public; and

WHEREAS, The trips of TNCs contribute to traffic congestion, air pollution, and wear and tear on the public infrastructure; and

WHEREAS, Currently, TNC trips do not pay taxes to the city of Oakland; and

WHEREAS, A 2017 study from the *University of California Davis, Institute of Transportation Studies*, stated, "Directionally, based on mode substitution and ride-hailing frequency of use data, we conclude that ride-hailing is currently likely to contribute to growth in vehicle miles traveled (VMT)"; and

WHEREAS, A report by the *San Francisco County Transportation Authority*, states: "TNCs drive approximately 570,000 vehicle miles within San Francisco on a typical weekday. This accounts for 20% of all local daily vehicle miles traveled (VMT) and includes both in-service and out-of-service mileage"; and

WHEREAS, A report by former NYCDOT staffer Bruce Schaller on TNC use in New York City stated that, "As a result of growing trip volumes, TNCs added 600 million miles of driving to city streets in 2016… The growth of on-demand ride services is also working to undercut the essential role of mass transit in absorbing growth in residents, workers and visitors."

WHEREAS, The City of Oakland wishes to ensure tax fairness, and to provide for adequate revenue for public needs; and

WHEREAS, Multiple other jurisdictions, including the City of Chicago, and the State of Massachusetts, have adopted and implemented per-trip charges for the trips taken via Transportation Network Companies; now, therefore, be it

RESOLVED, that the Oakland City Council finds and determines the forgoing recitals are true and correct and hereby adopts and incorporates them into this Resolution; and be it

FURTHER RESOLVED, that the Oakland City Council does hereby call for a municipal election and submit to the voters, at the November 6, 2018, Statewide General Election, an Ordinance that reads as follows:

Be it ordained by the People of the City of Oakland:

Section 1. Code Amendment. That a new Chapter 4.26 is added to the Oakland Municipal Code to read as follows:

Chapter 4.26 TRANSPORTATION NETWORK COMPANY USER TAX

4.26.010. Title

This chapter shall be known as the "Transportation Network Company User Tax Ordinance".

4.26.020. Definitions

Except as where context otherwise requires, the definitions given in this section govern the construction of this chapter:

1. "City" means the City of Oakland.

2. "Digital Network" means an online-enabled application software, website, or system offered, utilized, or controlled by a Transportation Network Company that enables the prearrangement of transportation services by Drivers with Passengers.

3. "Driver" means a person who receives connections to potential Passengers through a Digital Network and uses a vehicle to offer or provide Prearranged Transportation Services to those Passengers.

4. "Passenger" or "user" means a person who uses a Digital Network to connect with a Driver to request and pay for Prearranged Transportation Service.

5. "Person" or "people" means any non-exempt individual, firm, partnership, joint venture, association, social club, fraternal organization, joint stock company, corporation, estate, trust, business trust, receiver, trustee, syndicate, or any other group or combination acting as a unit.

6. "Prearranged Transportation Service" or "Prearranged Ride" means the transportation of a Passenger or Passengers by a Driver, arranged through a Digital Network.

7. "Tax", "Transportation Network Company User Tax", or "TNC User Tax" means the tax imposed by this chapter.

8. "Tax Administrator" means the Director of Finance of the City of Oakland or such other person as may be designated by the City Administrator.

9. "Transportation Network Company" or "TNC" means an organization, including, but not limited to, a corporation, limited liability company, partnership, sole proprietor, or any other entity, that provides Prearranged Transportation Services for compensation using an Digital Network to connect Passengers with Drivers.

4.26.030. Imposition and Rate of Tax

Subject to the provisions of this chapter, for each Prearranged Ride that originates in the City there is imposed a tax of 50 cents. Said tax constitutes a debt owed by the Passenger to the City, which is extinguished only by payment to the TNC at the time of payment for the Prearranged Ride.

4.26.040. Collection and Remittance of Tax by Transportation Network Company

Every TNC engaged in business in the City shall at the time of collecting payment for a Prearranged Ride originating in the City, collect the tax from the Passenger and remit the tax to the City on a monthly basis. In all cases in which the tax is not collected by the TNC, the TNC shall be liable to the City for the amount of tax due. A TNC is engaged in business in the City if it facilitates a ride for a Passenger that originates in the City.

4.26.050. Registration of Transportation Network Company

1. Every TNC must register with the Finance Department of the City within thirty (30) days of first engaging in business in the City, using a form provided by the Tax Administrator.

2. Every TNC engaged in business in the City on the effective date of this chapter must register with the Finance Department of the City within thirty (30) days, using a form provided by the Tax Administrator.

3. Each TNC registration shall set forth the name under which the TNC transacts or intends to transact business, the location of its primary place or places of business, and such other information to facilitate the collection of the tax as the Tax Administrator may require. The registration shall be signed by the owner if a natural person; in the case of an association or partnership, by a member or partner; in the case of a corporation, by an executive officer or some person specifically authorized by the corporation to sign the registration. The Tax Administrator shall within thirty (30) days after such registration issue without charge a certificate of authority to each registrant to collect the tax from the passenger. Such certificates shall be nonassignable and nontransferable and shall be surrendered immediately to the Tax Administrator upon the cessation of business in the city or upon its sale or transfer.

4.26.060 Duties of the Tax Administrator

It shall be the duty of the Tax Administrator to collect and receive all taxes imposed by this chapter and to keep an accurate record thereof. Said Tax Administrator is charged with the enforcement of this chapter, except as otherwise provided herein, and may prescribe, adopt and enforce those rules and regulations necessary or advisable to effectuate the purposes of this chapter, including provisions for the re-examination and correction of declarations, returns, and payments; the exclusive discretionary authority to waive penalties; and the authority to defer the payment due dates as prescribed herein. In individual cases, the Tax Administrator may make findings of fact in support of decisions, determinations and rulings enforcing this chapter. The Tax Administrator may prescribe the extent to which any ruling or regulation shall be applied without retroactive effect.

4.26.070. Determinations, Returns, and Payments

1. Due Date of Taxes. All taxes imposed by this chapter and collected by any TNC or required to be collected by any TNC are due and payable to the Tax Administrator for each taxable month on or before the fifteenth day of the month immediately following each respective monthly period.

2. Return—Time for Filing. On or before the fifteenth day of the month immediately following each monthly period, a return for the preceding monthly period must be filed with the Tax Administrator, in such form as the Tax Administrator may prescribe.

3. Contents of Return. Returns must show the amount of tax collected for the related period and such other information as required by the Tax Administrator. The Tax Administrator may require returns to show the total Prearranged Rides originating within the City upon which tax was collected or otherwise due, the total number of Prearranged Rides originating in the City for such period, and an explanation in detail of any discrepancy between the amounts.

4. Delivery for Return and Remittance. The return shall be transmitted with the remittance of the amount of the tax due to the Tax Administrator at the Finance Department on or before the date provided in this chapter.

5. Extension of Time for Filing a Return and Paying Tax. For good cause, the Tax Administrator may extend, for a period not to exceed thirty (30) days, the deadline for making any return or payment of tax. When an extension is granted, any TNC that makes a return and pays the tax within the period of such extension must pay, in addition to the tax, interest on the amount thereof at the rate of one percent per month, or fraction thereof, for the period of such extension to the time of return and payment. If the tax is not paid within the extension period or periods, a penalty will be assessed as if no extension was granted, as provided in Section 4.26.080.

4.26.080. Penalties and Interest

1. Original Delinquency. Any TNC that fails to remit any tax imposed by this chapter within the time required shall pay a penalty of 25 percent of the amount of the tax in addition to the amount of the tax.

2. Fraud. If the Tax Administrator determines that the nonpayment of any remittance due under this chapter is due to fraud, a penalty of 50 percent of the amount of the tax shall be added thereto in addition to the penalties stated in subdivision 1 of this section.

3. Interest. In addition to the penalties imposed, any TNC that fails to remit any tax imposed by this chapter shall pay interest at the rate of one percent per month or fraction thereof on the amount of the tax, inclusive of penalties, from the date on which the remittance first became delinquent until paid.

4. Penalties Merged with Tax. Every penalty imposed and such interest as accrues under the provisions of this section shall become a part of the tax herein required to be paid.

4.26.090. Deficiency Determinations

1. Recomputation of Tax—Authority to Make—Basis of Recomputation. If the Tax Administrator is not satisfied with the return or returns of the tax or the amount of the tax paid to the City by a TNC, he or she may compute and determine the amount required to be paid based upon the facts contained in the return or returns or upon any information within the Tax Administrator's possession or that may come into his or her possession. One or more deficiency determinations may be made of the amount due for one or more periods.

2. Interest on Deficiency. The amount of the determination, inclusive of penalties, shall bear interest at the rate of one percent per month, or fraction thereof, from the sixteenth day of the month following the close of the monthly period for which the amount or any portion thereof should have been paid until the date of payment.

3. Offsetting of Overpayments. In making a determination, the Tax Administrator may offset overpayments for a period or periods against underpayments for another period or periods or against penalties and interest on the underpayments. The interest on underpayments shall be computed in the manner as set forth in Section 4.26.080(3).

4. Penalty—Negligence or Disregard of Rules and Regulations. If any part of the deficiency for which a deficiency determination is made is due to negligence or intentional disregard of this chapter or authorized rules or regulations, a penalty of 25 percent of the amount required to be paid by the TNC, inclusive of interest shall be added thereto.

5. Penalty for Fraud or Intent to Evade. If any part of the deficiency for which a deficiency determination is made is due to fraud or an intent to evade this chapter or authorized rules and regulations, a penalty of 50 percent of the amount, inclusive of the interest and penalty as provided in Section 4.26.080, must be paid.

6. Notice of Tax Administrator's Determination—Service of. The Tax Administrator shall give to the TNC written notice of the determination. The notice may be served personally or by mail; if by mail, service shall be made by depositing the notice in the United States mail, in a sealed envelope with postage paid, addressed to the TNC at its business address as it appears in the records of the Tax Administrator. In case of service by mail or any notice

required by this chapter, the service is complete at the time of the deposit of the notice in the United States Post Office, without extension of time for any reason.

7. Time Within Which Notice of Deficiency Determination Is to Be Mailed. Except in the case of fraud, intent to evade this chapter or authorized rules and regulations, or failure to make a return, every notice of a deficiency determination shall be mailed within three years after the fifteenth day of the calendar month following the monthly period for which the deficiency determination applies or within three years after the return for the period to which the deficiency determination applies was filed, whichever period expires later.

4.26.100. Determinations If No Return Made

1. Estimate—Computation of Tax Penalty. If any TNC fails to make a return, the Tax Administrator shall estimate the number of Prearranged Rides originating in the City subject to the tax. The estimate shall be made for the period or periods for which the TNC failed to make a return and shall be based upon any information that is in the Tax Administrator's possession or may come into his or her possession. Upon the basis of this estimate, the Tax Administrator shall compute and determine the amount required to be paid to the City, adding to the sum computed a penalty equal to 25 percent thereof. One or more determinations may be made for one or more periods.

2. Manner of Computation—Offsets—Interest. In making a determination, the Tax Administrator may offset overpayments for a period or periods against underpayments for another period or periods or against penalties and interest on the underpayments. The interest on underpayments shall be computed in the manner as set forth in Section 4.26.080(3).

3. Interest on Amount Determined Due. The amount of the determination, inclusive of penalties, shall bear interest at the rate of one percent per month, or fraction thereof, from the sixteenth day of the month following the close of the monthly period for which the amount or any portion thereof should have been returned until the date of payment.

4. Penalty for Fraud or Intent to Evade. If the failure of any TNC to file a return is due to fraud or an intent to evade this chapter or rules and regulations, a penalty of 50 percent of the amount, inclusive of the interest and penalty as provided in Section 4.26.080, must be paid.

5. Giving Notice—Manner of Service. After making the determination, the Tax Administrator shall give the TNC written notice of the estimate, determination, penalty, and interest. The notice shall be served personally or

by mail in the manner prescribed for service of notice of a deficiency determination.

6. Time to Make a Determination. The Tax Administrator may make a determination in accordance with this Section at any time within five years of a return being due.

4.26.110. Appeal of Tax Administrator's Determination

1. Petition for Redetermination. Any TNC against whom a determination is made under this chapter may petition the Tax Administrator for a redetermination within thirty (30) days after service upon the TNC of notice thereof. If a petition for redetermination is not filed in writing with the Tax Administrator, City Hall, Oakland, California 94612, within the 30-day period, the determination becomes final at the expiration of the period.

2. Consideration of Petition—Hearing. If a petition for redetermination is filed within the 30-day period, the Tax Administrator shall reconsider the determination and, if the TNC has so requested in its petition, shall grant the TNC an oral hearing, and shall give the TNC at least ten days notice of the time and place of hearing. The Tax Administrator may designate one or more deputies for the purpose of conducting hearings and may continue a hearing from time to time as may be necessary.

3. Determination of Petition. The Tax Administrator may decrease or increase the amount of the determination before it becomes final, but the amount may be increased only if a claim for the increase is asserted by the Tax Administrator at or before the hearing.

4. Finality of Determination. The order or decision of the Tax Administrator upon a petition for redetermination becomes final thirty (30) days after service of notice thereof upon the petitioner. There is no appeal of the Tax Administrator's decision (or his or her deputies designated for a redetermination) to the City Council; writs challenging the Tax Administrator's decision must be filed with the appropriate court within ninety (90) days of the final date of such redetermination. (California Code of Civil Procedure § 1094.6.)

5. Tax a Debt. The amount of any tax, penalty, and interest imposed under the provisions of this chapter shall be deemed a debt to the City. Any TNC owing money to the City under the provisions of this chapter shall be liable to an action brought in the name of the City for the recovery of such amount.

4.26.120. Records

It shall be the duty of every TNC engaged in business in the City to keep and preserve, for a period of four years, all records as may be necessary to determine the amount of tax it may have been liable for the collection of and payment to the City, which records the Tax Administrator shall have the right to inspect upon issuance of a subpoena therefor pursuant to Oakland Municipal Code Section 5.34.050.

4.26.130. Refunds

A passenger may claim a refund of any amount overpaid, or erroneously or illegally collected or received by the City by filing a written claim therefor with the Tax Administrator within one year of the date of payment. The claim shall be on forms furnished by the Tax Administrator, and must state under penalty of perjury the specific grounds upon which the claim is founded. No refund shall be paid unless the claimant establishes to the satisfaction of the Tax Administrator his or her right thereto by written records showing entitlement thereto.

4.26.140. Violations

Any TNC which fails or refuses to register as required herein, or to furnish any return required to be made or which fails or refuses to furnish any other data required by the Tax Administrator, or which renders a false or fraudulent return or claim, or which fails to meet the substantive requirements of any other provision of this chapter may be charged with a civil penalty or an infraction.

Section 2. Severability. Should any provision of this Ordinance, or its application to any person or circumstance, be determined by a court of competent jurisdiction to be unlawful, unenforceable or otherwise void, that determination shall have no effect on any other provision of this Ordinance or the application of this Ordinance to any other person or circumstance and, to that end, the provisions hereof are severable.

Section 3. California Environmental Quality Act Requirements. This Ordinance is exempt from the California Environmental Quality Act, Public Resources Code section 21000 et seq., including without limitation Public Resources Code section 21065, CEQA Guidelines 15378(b)(4) and 15061(b)(3), as it can be seen with certainty that there is no possibility that the activity authorized herein may have a significant effect on the environment.

Section 4. General Tax; **Majority Approval; Effective Date.** This Ordinance enacts a general tax for unrestricted general revenue purposes. Tax revenue collected pursuant to the Ordinance may be used by the City for any municipal governmental purpose. The Ordinance shall be effective only if approved by a majority of the voters voting thereon and after the vote is declared by the City Council. The effective date of this Ordinance shall be January 1, 2019.

Section 5. Council Amendments. The City Council of the City of Oakland is hereby authorized to amend Chapter 4.26 of the Oakland Municipal Code as adopted by this Ordinance in any manner that does not increase the rate of the Transportation Network Company User Tax, or otherwise constitute a tax increase for which voter approval is required by Article XIII C of the California Constitution, including but not limited to, authority to enact temporary or permanent reduced or varying tax rates for Passengers using pools or other shared ride services.

; and be it

FURTHER RESOLVED: That the City Council of the City of Oakland does hereby request that the Board of Supervisors of Alameda County order the consolidation of the Oakland Municipal election called for herein with the statewide general election of November 6, 2018, consistent with provisions of State Law; and be it

FURTHER RESOLVED, that each ballot used at said election shall have printed therein, in addition to any other matter required by law, the following:

CITY OF OAKLAND MEASURE_____ TO ENACT A 50 CENT PER RIDE TAX ON PASSENGERS OF TRANSPORTATION NETWORK COMPANIES FOR RIDES FROM OAKLAND.

Measure __. CM Kaplan: Shall the Measure, to enact a 50 cent per pickup tax on the trips of Transportation Network Companies, for rides originating in Oakland, which is estimated to generate $2.5 million annually for the City of Oakland general fund until repealed by the voters, be adopted? [Updated recommendation: Shall the Measure to enact a 50 cent per ride general tax on the passengers of Transportation Network Companies for prearranged rides originating in Oakland, which is expected to generate $____ annually for the City of Oakland to fund any municipal government purpose until repealed by the voters, be adopted? **[FINAL QUESTION SUBJECT TO CITY ATTORNEY APPROVAL]**	**Yes**	
	No	

; and be it

FURTHER RESOLVED, that the City Council hereby authorizes and directs the City Clerk of the City of Oakland (the "City Clerk") at least 88 days prior to November 6, 2018, to file with the Alameda County Clerk certified copies of this Resolution; and be it

FURTHER RESOLVED, that the City Council does hereby request that the Board of Supervisors of Alameda County include on the ballots and sample ballots the recitals and the measure language to be voted on by the voters of the qualified electors of the City of Oakland; and be it

FURTHER RESOLVED, that the City Clerk is hereby directed to cause the posting, publication and printing of notices, pursuant to the requirements of the Charter of the City of Oakland, Chapter 3 of the Oakland Municipal Code, the Government Code and the Elections Code of the State of California; and be it

FURTHER RESOLVED, that in accordance with the Elections Code and the Oakland Municipal Code, the City Clerk shall fix and determine a date for submission of arguments for or against said proposed Ordinance and rebuttals, and said date shall be posted in the Office of the City Clerk; and be it

FURTHER RESOLVED: That the City Clerk and City Administrator are hereby authorized and directed to take any and all actions necessary under law to prepare for and conduct the 2018 statewide general election and appropriate all monies necessary for the City Administrator and City Clerk to prepare and conduct the November 6, 2018 statewide general election in a manner consistent with the laws of the City and the State of California; and be it

FURTHER RESOLVED, that certain sections of this Ordinance may be codified into the City of Oakland Municipal Code at the direction of the City Clerk upon approval by the voters; and be it

FURTHER RESOLVED, that this resolution shall be effective immediately upon approval by five members of the Council.

IN COUNCIL, OAKLAND, CALIFORNIA _____, 2018

PASSED BY THE FOLLOWING VOTE:

AYES- BROOKS, GALLO, GIBSON MCELHANEY, GUILLEN, KALB, KAPLAN, CAMPBELL WASHINGTON, AND PRESIDENT REID

NOES

ABSENT

ABSTENTION

ATTEST:

_____
LATONDA SIMMONS
City Clerk and Clerk of the Council
Of the City of Oakland, California