

DRAFT

LADOT TAXI AND FOR-HIRE
VEHICLE STUDY

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0. Executive Summary

Section 1: Background and Methodology

The growth of shared and on-demand mobility over the last decade has presented challenges for urban transportation and policy. While this growth in Transportation modes is expanding the number of mobility options available to Angelenos, it is also impacting congestion, impacting the incumbent taxicab industry, and thus, requires attention. Most of these modes are owned and operated by private companies and operate within the public right-of-way. LADOT is embarking on a proactive approach to manage these companies to protect consumers, ensure public safety, manage curb space, level the playing field for incumbent taxicab companies, and minimize modal conflicts.

Since the arrival of transportation network companies (TNCs) in Los Angeles, taxi ridership in the city has declined by 51% between March 2013 (peak ridership) and March 2017 (latest data available). Assuming a linear rate of decline consistent with trends from other large U.S. metropolitan areas, the report estimates a 77% decline in taxi ridership between March 2013 and November 2018. There is no question that the competition and disruption created by TNCs and other shared modes have set the stage for a broader paradigm shift in transportation policy and regulation. This disruption has led governments to start thinking about transportation regulation as not just about the management of roadways and public transportation systems, but also about the integration of private for-hire transportation services into the overall mix of public and private modes. Addressing these emerging issues are important because the distinctions between modes and sub-modes, as well as between public and private transportation, continue to become more blurred as a result of technological innovations (e.g., shared mobility networks, connected and automated vehicles, smartphone technology, and data-sharing platforms).

Recognizing this evolution, disruption, and growing multimodal nature of travel within Los Angeles' mobility ecosystem, the Los Angeles Department of Transportation (LADOT) is eager to understand how the growth of shared micromobility and TNCs, the potential for growth of automated taxis and urban air mobility, and changes in travel behavior can help Angelenos reimagine the transportation network. In 2018, LADOT initiated a planning process to determine the best framework for regulating taxis, TNCs, microtransit and all forms of for-hire transportation services according to a single for-hire vehicle framework in accordance with the department's strategic implementation plan. The city hired a consultant to independently review and evaluate current regulatory practices and suggest alternative approaches, where appropriate.

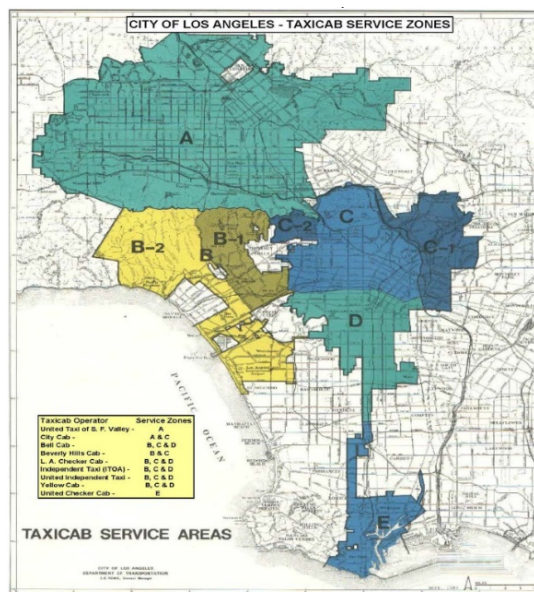
Existing Regulatory Structure

LADOT regulates taxicabs as a public utility subject to the jurisdiction of the Board of Taxicab Commissioners and the Los Angeles Department of Transportation. Anyone wishing to operate a taxicab in Los Angeles must obtain a franchise agreement with the city and each vehicle must be permitted by the Taxicab Commission. The five-member Taxicab Commission is responsible for adopting rules and regulations governing the taxicab utility industry, including rules and regulations pertaining to the service, safety, and operation of the vehicles; rules and regulations prescribing limitations, conditions and qualifications of applicants for vehicle permits and driver permits; and rules and regulations specifying the monetary penalties that may be assessed against operators and drivers. LADOT is responsible for general administration and enforcement of the established rules and regulations

applicable to taxicab companies, drivers, and vehicles, including conducting background checks and permitting of both taxicab drivers and taxicab vehicles.

As of August 2019, there are nine existing ordinances granting franchises to provide taxicab service in Los Angeles. These franchises were granted by the City Council following determination of public need analysis using the procedures prescribed in Administrative Code Section 13 and Ordinance No. 58200 for granting franchises, permits, and privileges. While the city initially adopted a franchise model in the mid-1990s, the existing ordinances became effective in 2001 and the city granted extensions to all current taxicab operators under their existing franchise agreements through December 31, 2019.

The franchise system places geographic restrictions on where taxicab companies and drivers may operate. The City of Los Angeles is divided into five different service zones (A through E). Each operator maintains primary service responsibility in at least one service zone but may have responsibility for up to three service zones. Under the terms of the franchise ordinance, a certain percentage of the operator's fleet must be dedicated to operating within the assigned service zone(s), and franchisees are expected to distribute their fleets through the service zone as necessary to meet demand and service response levels. Taxicab companies may supply service throughout the City but must maintain acceptable service in their primary service area.



In addition to regulating service areas, the franchise system maintains specific requirements for:

- Data reporting
- Performance standards and evaluation
- Vehicle safety and inspections
- Driver requirements
- Enforcement by the Taxi Commission and the LADOT For-Hire Policy and Enforcement Division, the Authorized Taxicab Supervision (ATS) at LAX, and the Los Angeles Police Department (LAPD)
- Equitable service standards including compliance with the Americans with Disabilities Act (ADA) and prohibiting discriminatory practices
- Vehicle and technology requirements to encourage innovation and environmental sustainability

The existing regulatory structure and requirements under the franchise system are reviewed in greater detail in the report.

Report Overview and Study Methodology

This report reviews Los Angeles' existing franchise system and operating requirements for taxis, discusses the impacts of TNCs on the taxi industry, and reviews issues related to bandit cabs and enforcement. As part of this study, the consultant conducted a peer review of regulations, policy

considerations, current practices, and organizational structures as part of a broader review of the city's for-hire service regulation. The consultant employed a multi-method approach that included a:

- **Taxi and Private Transportation Vehicle Study Framing Workshop** to determine the study's goal and focus
- **Peer city review** regulations, policies, or accepted practices regarding taxicabs and for-hire vehicles from 11 domestic and international cities
- **Stakeholder engagement** with taxi operators, TNCs, taxi drivers, Los Angeles World Airports (LAWA), AccessLA Paratransit Services, and the Los Angeles City Council
- **Review of taxi complaints** submitted to the LADOT and a **customer satisfaction survey** conducted by the Fairfax Research Group for Access paratransit services
- **Customer satisfaction survey** implemented in partnership with taxi app Curb
- **Development of a proposed regulatory framework**
- **Review of the department's staffing and organizational structure**, with an examination of how this could evolve given changes in transportation technology and the regulatory framework

This report summarizes key findings from stakeholder engagements and customer surveys. Finally, this study proposes a framework to regulate all for-hire vehicle services in Los Angeles and incentivizes services that align with the city's goals and objectives. The proposed framework discusses the purpose of for-hire regulation, key policy considerations (e.g., equity, congestion mitigation, accessibility, staffing implications, etc.), and proposes an incentive program and implementation plan.

Section 2: Findings

The following section outlines the findings from the study and provides recommendations for the regulatory framework and incentive system.

Proposed Regulatory Framework

LADOT will transition from the Franchise System to an Open Market with Entry Requirements system as a primary step to level the playing field between the incumbent taxicab industry and TNCs. This includes being part of a universal dispatch system coupled with relaxed requirements on trade dress, an expedited onboarding system, and other enhancements including TNC-like upfront pricing models to help modernize taxi service for customers in the Los Angeles region.

In addition, recognizing the notable transformation that has occurred with the arrival of microtransit, shared micromobility, TNCs, and other mobility innovations, as well as the potential disruption associated with upcoming vehicle automation and urban air mobility, this report proposes a flexible, incentive-based regulatory framework that can be applied to all incumbent, innovative, and emerging mobility service providers to achieve the city's goals and preferred outcomes. The proposed framework identifies eight regulatory categories:

- For-hire Services (Taxi/TNCs)
- Automated For-Hire Services (Taxi/TNCs)
- High-Occupancy Vehicle (HOV)/Microtransit
- Automated HOV/Microtransit

- Goods Delivery
- Automated Goods Delivery
- Urban Air Mobility (UAM)
- Shared Micromobility

The proposed framework is guided by five key principles:

- Improving transportation equity and accessibility;
- Reducing and mitigating congestion;
- Expanding economic opportunities for all Angelenos;
- Fostering innovation and preparing for changes in mobility and technology; and
- Leveling the playing field among various for-hire services.

Incentive Structure

The incentive structure is based on LADOT’s values surrounding mobility and will require mobility providers to meet certain performance metrics in order to access certain privileges in that category. Within each regulatory category, there will be a menu of incentives to reward participants for reaching or exceeding certain performance metrics, as determined by LADOT. With this, LADOT can use choice architecture to encourage private mobility companies towards better decisions. Decisions are not made within a vacuum and choice architecture refers to the design in which choices can be presented to companies and the impact of that on decision making. This framework is intended to provide flexibility and allow the LADOT to encourage mobility service providers to serve public interest while encouraging private sector innovation.

The foundation of the proposed policy framework is that measurable metrics will be used to judge the performance of taxi and other for-hire transportation services. Each metric is tied to one of LADOT’s goals in order to ensure that we are encouraging actionable behaviors that will lead to our preferred outcome. Metrics are also tied to specific incentives to reward participants for reaching or exceeding each performance metric. the following incentive structure is proposed for taxicabs, TNCs and microtransit and is in addition to minimum permitting requirements.

Goal 1: Improve Transportation Equity and Accessibility

Performance Indicators	Incentive
Diverse payment options – cash and card options available	Minimum required to access incentives in this category
Coverage of underserved areas (e.g., low-income, minority, and other communities): average wait times in low-income and minority communities must relatively be within a certain percentage of	For taxis, participation in third party universal booking system, if spatial equity performance is documented through provision of MDS data.

all other areas served within jurisdictions where vehicles are permitted to operate.	For TNCs and microtransit, partial refund on trip accessibility fee.
Accessible vehicles: successful location and matching of an accessible vehicle within a certain percentage wait time compared to the service's overall wait time.	Collected Accessibility trip fees may be used for maintenance or purchase of Wheelchair Accessible Vehicles (WAVs). The LADOT will also explore a reduction or elimination of WAV permit fees for top performers.

Goal 2: Decrease or mitigate congestion; emissions reductions.

Performance Indicators	Incentive
Participation in pooled ride services (either their own, as a microtransit service, or through a service such as Bandwagon)	Minimum required to access incentives in this category
Meet minimum average vehicle occupancy goals or percentage of pooled rides	Access to network of HOV lanes, including on surface streets
Documented use of designated pick-up and drop-off areas only in identified congestion zones (through provision of MDS data)	Access to off-street driver rest areas with EV charging stations, bathrooms and vending.

Goal 3: Expand economic opportunities and fostering innovation.

Performance Indicators	Incentive
Compliance with data sharing in standard MDS format	Minimum standard for taxis; Permit to operate automated vehicle and urban air mobility pilot programs for TNCs and taxis

Goal 4: Enhance openness and flexibility to new technology.

Performance Indicators	Incentive
Participation in universal booking application	Mandated schedule with pilot program in future minimum requirements for permitting.

Goal 5: Level the playing field among the various for-hire vehicle sectors.

Performance Indicators	Incentive
Participation in a universal booking system	Access to airport property in coordination with Los Angeles World Airports (LAWA/LAX)
Compliance with transitional taxi automation schedule	See incentives for improving transportation equity and accessibility.

Preparing Los Angeles for Changes in Transportation

The study recommends that LADOT undertake a number of actions to prepare the organization and its regulations for changes in mobility. It is clear that technological, mobility, and societal trends are changing how Angelenos are travelling. While Los Angeles has been and is still heavily dependent on the personal automobile for mobility, changes in technology, demographics, economics, and attitudes are transforming how mobility is accomplished. Increasing congestion and the need to maximize existing infrastructure use—coupled with the growth in telecommuting, goods delivery, and digital consumption—are changing mobility needs, consumption, and traveler behavior. Increasingly, consumers are accessing mobility, goods, and services on-demand by dispatching or using shared mobility, micromobility, automated vehicles, courier services, automated (or self-piloted) aerial vehicles and drones, and public transportation solutions.

In the future, automation could be the most transformative trend to impact regions and public transportation since the automobile. Vehicle automation may result in fundamental changes to public transportation by altering the built environment, costs, commute patterns, and modal choice. Reduced vehicle ownership due to Shared Automated Vehicles (SAVs) could result in changes in parking needs, particularly in urban centers. While SAVs may compete with public transit ridership, infill development could also create higher densities to support additional public transit ridership and allow for the conversion of bus transit to rail transit in urban cores. However, the growth of telecommuting and AVs also make longer commutes more practical, which could shift consumer preferences in favor of suburban and exurban living.

This report represents an important milestone for LADOT to prepare for this transformation. While the impacts of emerging technologies on auto ownership, parking, travel behavior, equity, and the environment remain to be seen, this report outlines a framework that LADOT can use to develop policy and regulate existing and emerging mobility services; monitor environmental, equity, and travel metrics; incentivize desired outcomes; and prepare for an automated taxi future.

1. Introduction

In recent years, a growing number of mobility services have entered the Los Angeles mobility marketplace. In particular, for-hire services have grown rapidly due to advancements in technology and the advent of on-demand app-based services. Since the advent of these disruptive services, many local ordinances and state laws have been enacted in the United States and around the globe to address key policy concerns such as consumer safety, accessibility, equity, labor, insurance, and other issues. Taxicab service (on-demand street hails, taxicab stands, and pre-booked services) has traditionally been regulated locally, although the authority to do so is delegated by the state. In contrast, TNCs have generally pushed for statewide regulation.

Recognizing this evolution and disruption within Los Angeles' mobility ecosystem, the Los Angeles Department of Transportation (LADOT) is eager to understand how the growth of shared micromobility and TNCs, the potential for the growth of automated taxis and urban air mobility, and changes in travel behavior can help Angelenos reimagine the transportation network. In 2018, LADOT initiated a planning process to determine the best framework for regulating taxis, TNCs, microtransit and all forms of for-hire transportation services according to a single for-hire vehicle framework in accordance with the department's strategic implementation plan. This report is the result of that planning process.

1.A Objective

"...LADOT will recommend a for-hire trip framework, including specifics on operations, data, goods movement, curbside usage, enforcement, and other considerations based on the Strategic Implementation Plan and realities of the industry. The regulation will support innovative business models for an automated, world-class mobility system by 2028. This report will be data-driven, reflect stakeholder input, address equity, social justice, and congestion, and is practical, logical, and implementable."

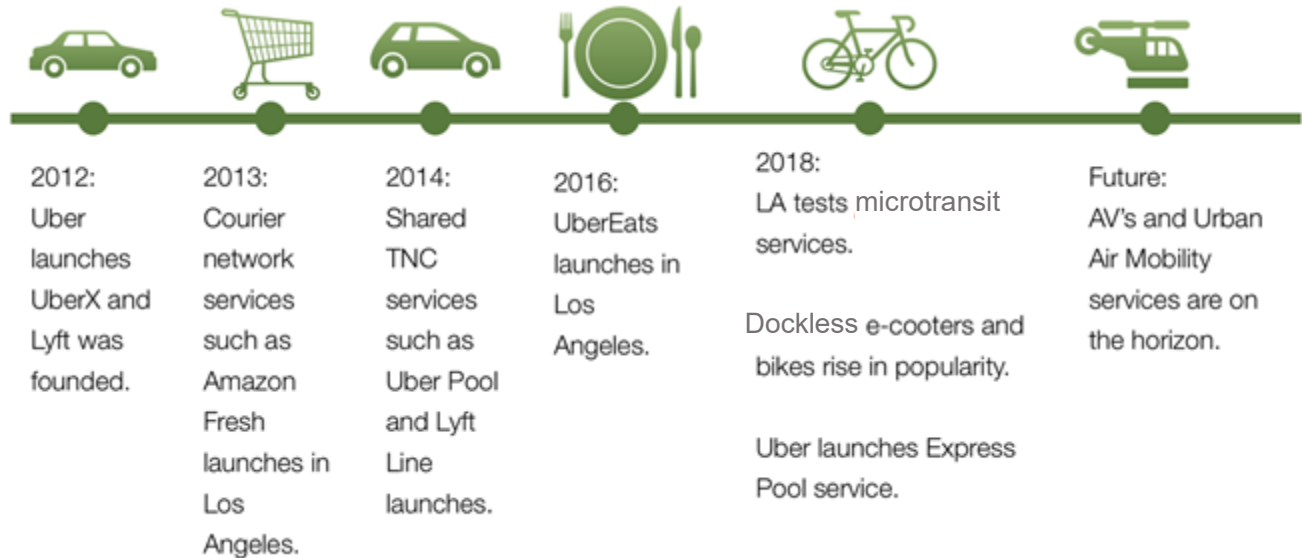
- LADOT Taxi and PTV Study Vision Statement

The Vision Statement was crafted with stakeholders during the LADOT Taxi and PTV Study Framing Workshop to determine the study's goal and focus – to ultimately recommend a for-hire trip framework to support an automated mobility system.

This Study seeks to devise a framework that rationalizes regulation of all for-hire vehicle services in Los Angeles and that incentivizes these services to achieve the city's goals and objectives. In addition, this study seeks to integrate for-hire vehicles into the transportation vision established in LADOT's Strategic Implementation Plan (SIP). The key strategies articulated in the SIP are as follows:

1. Build a solid data foundation
2. Leverage technology and design for a better transportation experience
3. Create partnerships for more shared services
4. Establish feedback loops for services and infrastructure
5. Prepare for an automated future

Figure 1: Recent Innovations in Mobility in Los Angeles



This vision is rooted in the establishment of a Mobility Data Specification (MDS) that endeavors to have all transportation operators on city streets provide operations data to LADOT in an automated and standardized format, allowing the city to make data-driven decisions about transportation management and lay the foundation for active (real-time), digital management of transportation services.

1.B Guiding Principles

LADOT’s current regulation applied to for-hire vehicles is only applicable to taxicabs and contractually-based microtransit services. However, in recent years, a number of innovative mobility services have been introduced and widely adopted, with taxicabs becoming an increasingly smaller percentage of the for-hire vehicles on the road. The transportation marketplace has exploded with a variety of shared services that facilitate personal mobility in addition to courier network services with more to come on the horizon as technology continues to advance.

The mobility of both people and goods is being disrupted and is experiencing a rapid evolution. A fundamental shift in mobility services has occurred with the rise of on-demand transportation, shared mobility, and the commodification of transportation services—where modes have economic values that are distinguishable in terms of cost, journey time, wait time, number of connections, convenience, and other attributes. The growth of innovative shared mobility options has increased the number of available service options within the transportation marketplace. Mobility is increasingly treated as a commodity, bought by the trip without the need to own the means of production.

Innovative modes have expanded the mobility options of Angelenos. However, as most of these modes are owned and operated by private companies, LADOT needs a way to proactively manage the operations of these companies in the interest of the public good, whether that is encouraging the sharing of data to enhance transparency or the use of shared rides to decrease congestion.

LADOT’s new framework for taxi and for-hire vehicle regulation should be guided by the following principles (shown in Figure 2, below) in order to create and maintain a sustainable and viable transportation system for the city and the region.

Figure 2: Guiding Principles



1. **Improving transportation equity and accessibility:** Special attention should be paid to make sure any new framework emphasizes equitable accessibility for all user groups, helping to remove barriers to work, health, and recreation for all people in Los Angeles.
2. **Traffic congestion reduction and mitigation; emissions reduction:** Traffic congestion wastes time and energy, negatively affecting the economy. It also increases greenhouse gas emissions, contributing to climate change, and air quality degradation.
3. **Expanding economic opportunities and fostering innovation:** Transportation systems should be designed to continually encourage innovations that further broader social and economic goals and improve quality of life for all people who live and travel through Los Angeles.
4. **Openness/flexibility to new technology:** California is an incubator for new technology and Los Angeles should draw on the innovative technology firms located here to test new technology and create new applications.

5. **Leveling the playing field among the various for-hire vehicle sectors:** In order to encourage innovation and maximize customer utility, a regulatory framework for for-hire vehicles should be focused on best fulfilling customer-facing functions, rather than maintaining artificial divisions between types of services, with differing requirements for different types of operators. Regulations should fulfill an important purpose and be applied consistently across operator types to the extent possible.

2. Existing System

2.A Review of City's Franchise System

Overview of the Regulatory System in Los Angeles

In California, state law requires cities and counties to regulate taxicab transportation services in their jurisdiction.¹ At a minimum, each locality must adopt ordinances or resolutions that establish a policy for entry into the taxicab business and taxicab rates.² Since the early 1900s, the City of Los Angeles (the "City") has used a franchising system to authorize taxicab operations for the street-hail, designated taxi stand, and telephone dispatch markets, as well as at the airports. Since 2000, the City has been the only large metropolitan area in the United States to use a franchise system to regulate taxis.³

The City of Los Angeles (the "City") regulates taxicabs as a "public utility" subject to the jurisdiction of the Board of Taxicab Commissioners (the "Taxicab Commission") and the Los Angeles Department of Transportation ("LADOT").⁴ Anyone wishing to operate a taxicab in Los Angeles must obtain a franchise agreement with the City.⁵ In addition, each specific vehicle must be separately permitted by the Taxicab Commission. Each franchise is a separate ordinance that is adopted by the City Council and approved by the Mayor.

The five-member Taxicab Commission is responsible for adopting rules and regulations governing the taxicab utility industry, including rules and regulations pertaining to the service, safety, and operation of the vehicles; rules and regulations prescribing limitations, conditions and qualifications of applicants for vehicle permits and driver permits; and rules and regulations specifying the monetary penalties that may be assessed against operators and drivers.⁶ The LADOT For-Hire Policy and Enforcement Division is responsible for general administration and enforcement of the established rules and regulations

¹ See California Government Code §§ 53075.5, *et. seq.* Added Stats 1983 ch. 1260 § 2, as Cal. Gov't Code § 53075. Renumbered by Stats 1986 ch. 248 § 87. Amended Stats 1995 ch. 405 § 1 (SB 46); Stats 2017 ch. 753 § 2 (AB 1069), effective January 1, 2018, repealed January 1, 2019.

California recently amended the taxicab transportation service law, Cal. Gov't Code § 53075.5, *et. seq.*, to "modernize the regulation of taxicab transportation services in order for taxicabs to better compete with all for-hire modes of transportation." See 2017 Cal ALS 753, 2017 Cal AB 1069, 2017 Cal Stats. ch. 753. Effective January 1, 2019, cities and counties may regulate taxicabs only if the taxicab is operated and substantially located within its jurisdiction. In addition, as an alternative to regulation by an individual city or county, joint powers of authority or a regional transportation authority may provide the administration and regulation of taxicab operations.

² *Id.*

³ Nelson/Nygaard Consulting Associates, "Making Taxi Service Work in San Francisco, Appendix E, Regulating Outcomes, Not Inputs," p. 3.

⁴ L.A., Cal. Admin. Code § 22.484(g)(2)(B)(1)(ii).

⁵ L.A. Municipal Code § 71.02(b).

⁶ L.A. Admin Code, div. 22, ch. 20, Art. 9; L.A. Municipal Code, ch. VII, Art. 1 (amended by Ord. No. 161,249, Eff. 6/20/86); Taxicab Rules and Regulations of the Board of Taxicab Commissioners ("Taxicab Rules"), established by Board Order No. 471.

applicable to taxicab companies, drivers, and vehicles, including conducting background checks and permitting of both taxicab drivers and taxicab vehicles.⁷

The Franchise

Awarding Taxi Franchises

The City awards franchises through a competitive selection process, pursuant to and in accordance with the provisions of Article 2 through Article 13 inclusive of Chapter 1, Division 13 of the Los Angeles Administrative Code, which prescribes the procedure for the granting of franchises. Each franchise is a separate ordinance that is adopted by the City Council and approved by the Mayor. Before the Council approves taxicab franchises or takes any other action that affects an existing franchise, the applications are first sent to the Taxicab Commission for review and recommendation.⁸ The Taxicab Commission must consider public convenience and necessity prior to making its recommendation to Council on any franchise application.⁹

Each franchise contains a set of rules establishing the terms and conditions under which the franchisee may provide service, including each geographic area (a “service zone”) where it may provide service (“Primary Service Area”), as well as taxicab fleet size and the percentage of wheelchair accessible vehicles and clean fuel/emissions vehicles. The franchise also sets out operation and service standards for general operations, taxicabs, drivers, dispatch, communication, and service reporting. All operators are required to meet the same minimum requirements for operations and service and are subject to the same performance evaluation process and penalties for failing to abide by the terms and conditions of the franchise ordinances. By requiring taxi companies to monitor service, drivers, members, and performance levels, the franchise system shifts some of the costs to the operators.

The franchise system allows the City to regulate and control the industry. Because the City sets the terms of the franchise ordinances, the City has flexibility to alter service requirements during the franchise period to account for changes in technology, vehicle standards, and other circumstances. For example, ordinances have been used to require enhanced technology and establish green taxicab programs.

Franchise Period

Franchises are for a five-year period, with a possible 2-year extension based on annual performance reviews. The last year the City re-bid taxicab franchises was in 2000. The current franchises became effective on January 1, 2001 and have remained effective through a series of extensions granted by the City Council based on annual performance reviews by Taxicab Commission. The current franchises are all set to expire December 31, 2019.

Currently, nine cab companies have franchises to operate in the City: United Independent Taxi, United Taxi of San Fernando Valley, Yellow Cab, Bell Cab, Beverly Hills Cab Company, LA Checker Cab, City Cab, Independent Taxi, and United Checker Company. Each entity was approved to operate and maintain a specific number of vehicles and required to maintain service standards in at least one primary service area.

⁷ The City requires taxicab drivers and vehicles to obtain permits from LADOT. See L.A. Municipal Code §§ 71.02, 71.03.

⁸ L.A. Admin. Code § 13.12 (2000).

⁹ L.A. Municipal Code § 71.12(b).

Franchise Fees

As the franchisee, taxicab companies are required to pay the following fees:¹⁰

- Annual taxicab vehicle permit fee for each vehicle fleet position slot used during the calendar year;
- Monthly franchise base fee for each authorized taxicab fleet position (\$128.00 multiplied by a meter rate adjustment factor determined by the Taxi Commission);
- Monthly franchise fee for each authorized taxicab fleet position (base fee multiplied by the Service Factor [currently 50%]);
- Monthly taxicab vehicle bandit enforcement fee for each taxicab in service during any part of the billing month (amount specified in L.A. Municipal Code § 71.06.1).

The total monthly franchise fee is due 30 days after the end of the month. Late payments are subject to penalties and interest charges.¹¹

Areas of Regulation

Service Area

The franchise system places geographic restrictions on where taxicab companies and drivers may operate. The City of Los Angeles is divided into five different service zones (A through E), as shown in Figure 3. These zones are shown in the figure below. Each operator maintains primary service responsibility in at least one service zone but may have responsibility for up to three service zones. Under the terms of the franchise ordinance, a certain percentage of the operator's fleet must be dedicated to operating within the assigned service zone(s), and franchisees are expected to distribute their fleets through the service zone as necessary to meet demand and service response levels. Taxicab companies may supply service throughout the City but must maintain acceptable service in their primary service area.¹² Additionally, other neighboring cities such as Beverly Hills, West Hollywood, and Santa Monica may have their own regulatory structure.

Drivers are generally prohibited from soliciting passengers outside their assigned service area and may not pick up passengers outside the limits of their taxicab operator's defined service area except on a

¹⁰ L.A. Municipal Code § 71.05(b) (Amended by Ord. No. 177,843, Eff. 10/1/06.).

¹¹ *Id.*

¹² See Franchise Ordinance, Sec. 2.3.

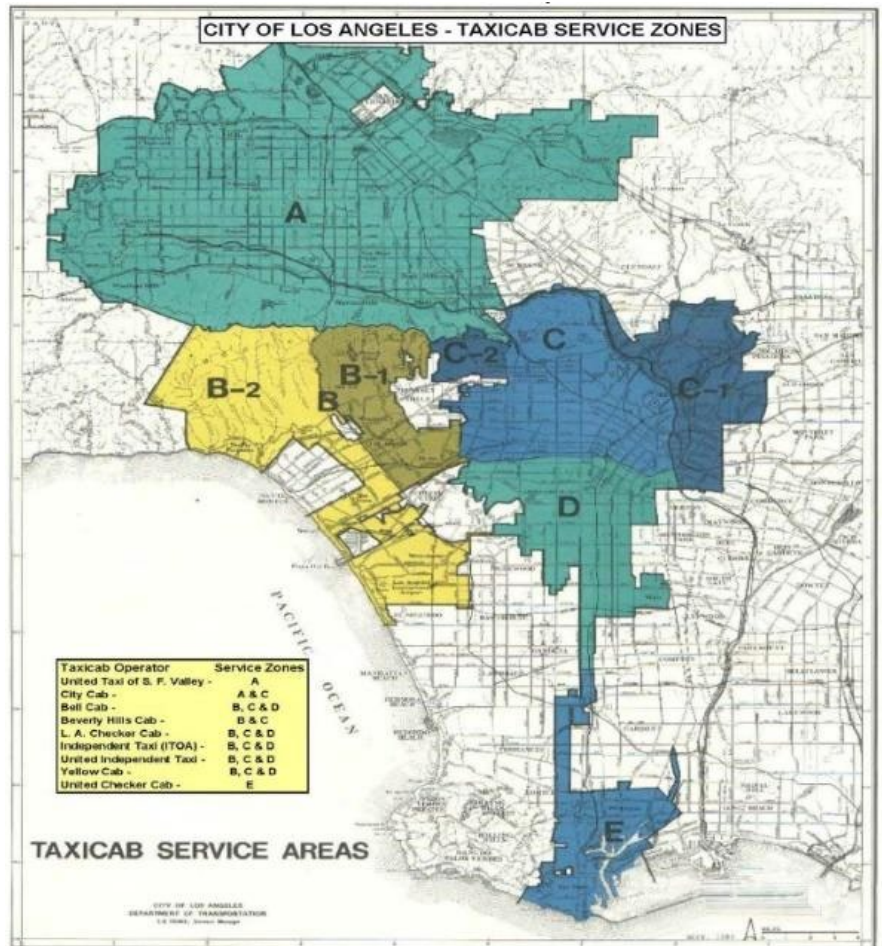
telephone or equivalent communication dispatch.¹³ Franchisees may operate at LAX, but each vehicle is only allowed to pick up passengers there every five days.

Reporting Requirements

The franchise ordinances require taxicab companies to submit monthly data reports to LADOT with the response time information from telephone or equivalent service calls on the following:

- Service response data by area, reported by total city/individual service zone/sub-zone
- Service response data by vehicle, reported by total city/individual service zone/sub-zone
- Service response data by wheelchair accessible vehicle, reported by total city/individual service zone/sub-zone
- Service response data by wheelchair accessible vehicles for wheelchair requested trips, reported by total city/individual service zone/sub-zone

Figure 3: City of Los Angeles – Taxicab Service Zones



This data must be separated into categories of response time: up to 15 minutes; between 16 and 30 minutes; between 31 and 60 minutes; greater than 60 minutes; and no show or no load. In addition, taxicab companies must provide the total number of service calls received; the number of calls that took longer than 45 seconds to answer; and the number of calls placed on hold for longer than two minutes during the reservation process.

Performance Standards & Evaluation

Annually, each franchise grantee is required to update and submit a management/business plan for meeting the requirements of the franchise ordinance to LADOT and the Taxi Commission for approval and review.¹⁴ The franchise ordinance sets the categories that each management/business plan must address, which currently include the following:

- An annual financial statement (for the previous calendar year) as prepared by a certified public accountant
- Organizational structure and procedures

¹³ Taxi Rules §§ 741–745.

¹⁴ Taxicab Rules § 221.

- Management/administrative structure and procedures
- Dispatch and communications (description of facilities, personnel, and technology)
- Operating location(s), storage/parking of vehicles (description of facilities and personnel)
- Programs and activities for driver training, testing, supervision and social benefits
- Vehicle maintenance and inspection
- Procedures for maintaining service levels, programs for addressing service deficiencies
- Service/operation procedures for discipline, driver evaluation, complaint processing and accident/safety control
- Special programs, ordinances and services
- Record keeping
- Plan Evaluation and response to changes or additions

The LADOT uses management/business plans as the basis to conduct a performance review and evaluate the franchisee's ability to meet service demands based on the following performance metrics:

- Dispatch service response levels
- Phone service responsiveness
- Complaints received by LADOT
- Operator and driver Board Rule violations and penalty points
- Vehicle inspections
- Late payments for any fees and penalties
- Hard-to-serve area and special program service levels
- Adherence to management/business plan
- Compliance with vehicle/driver/member standards and record keeping policies
- Timely submission of data and information to LADOT
- Compliance with any and all applicable rules, laws, and codes

The Taxi Commission uses the results of these evaluations to determine franchise extension, continuation, probation, suspension, penalty assessment, recommendation for revocation, or any combination thereof.

Vehicle Safety & Inspections

The franchise ordinances specify that all taxicabs must be part of a fleet that has received a City franchise and obtain a separate vehicle permit from LADOT to operate.¹⁵ All vehicles must pass an inspection by LADOT before providing service and then annually thereafter.¹⁶ In addition, under the terms of the franchise ordinance, taxicab companies are required to perform weekly inspections and provide drivers with training on vehicle safety and maintenance/inspection checks. The taxicab companies must maintain records of all inspections, preventative maintenance, and maintenance repair records for each taxicab, and provide detailed descriptions of vehicle maintenance and inspection in their annual business/management plans that are submitted to LADOT.¹⁷

Drivers

The L.A. Municipal Code and Taxicab Rules require drivers to obtain a permit from LADOT before beginning to drive a taxicab and annually thereafter.¹⁸ The driver permitting process includes a complete

¹⁵ L.A. Municipal Code § 71.02.

¹⁶ Taxicab Rules §444.

¹⁷ Taxicab Rules §451.

¹⁸ L.A. Municipal Code §§ 71.03(c) and 71.11; Taxicab Rules §§600, *et seq.*

examination of the driver's 10-year driving record with the California DMV, a criminal background search with the California Department of Justice (DOJ), submission to a test for controlled substances, and proof of United States Citizenship or right to work.¹⁹ Applicants may also be required to provide a medical report if they are afflicted with either a physical or mental incapacity that would preclude them from safely operating a taxicab.²⁰

Although all drivers are considered Independent Contractors, they must be sponsored by, and permitted to drive for, a particular taxicab organization before they apply for a permit from LADOT. As part of the City's franchising requirements, each franchised taxicab operator must provide individuals with driver training before they apply for a new permit. The training program must cover driver safety and defensive driving, behind-the-wheel driver training, and accessible vehicle operation training and CPR certification for accessible vehicle drivers. Taxicab operators are required to provide drivers with training regarding the safe and efficient use of all in-vehicle routing equipment and devices (street atlas and GPS or other computerized mapping and routing programs).²¹

Once permitted, a lease driver will pay a set-lease fee to the vehicle owner or to the franchise holder on behalf of the vehicle owner. Drivers who own their own vehicles pay regular membership dues and assessments to the taxicab organization (franchisee) rather than a set lease fee. Both types of drivers (lease drivers and vehicle owners/members) are responsible for paying for gas, but all other costs for vehicle repairs, insurance, replacement, *etc.*, are the vehicle owner's responsibility.

The taxicab operator's dispatch system and cashiering functions are fully available to the individual driver, but the taxicab driver may also use their own source of trips, including personal clients, flag-downs or street-hails, hotel trips, and at the Los Angeles International Airport (LAX).

All vehicles (and drivers) are authorized to operate at LAX on set schedules (currently every five days based on the last digit of the taxicab identification number). While a driver is not required to work at LAX on their airport day, most find this a financially rewarding boost to their regular income as airport days generally provide a higher income level than normal dispatching trips.

City and State rules also apply to the total amount of hours that a driver can work prior to taking a break. California Vehicle Code Section 21702(a) designates that drivers are restricted to no more than 10 straight hours of driving (without a break), and no more than 10 hours over any 15-hour period. An eight-hour break is also stipulated in the Code.

Enforcement

Taxi operators and drivers are regulated by three entities: the Taxi Commission and the LADOT For-Hire Policy and Enforcement Division, the Authorized Taxicab Supervision (ATS) at LAX, and the Los Angeles Police Department (LAPD).

¹⁹ Taxicab Rules §601(c).

²⁰ Taxicab Rules §§604–605.

²¹ Taxicab Rules §612.

LADOT investigates alleged wrongdoing by drivers and recommends discipline for action by the Taxicab Commission. Sustained wrongdoing may result in revocation of the company's franchise or a driver's permit.

The Taxi Commission may suspend a taxicab franchise or levy monetary fines on franchisees for failing to abide by the terms and conditions of their franchise (*e.g.*, failing to submit required or requested information or records), operating unlicensed vehicles or conducting any unauthorized public transportation operation.²² Violators may be subject to fines of up \$10,000 for the first offense, up to \$25,000 for the second offense within a 12-month period, and a maximum of \$50,000 for third and subsequent offenses within subsequent 12-month periods.²³ Only single penalty assessments that exceed \$30,000 are subject to appeal to the City Council.²⁴

How is the Existing Regulatory Framework Contributing to LADOT's Guiding Principles?

Improving Transportation Equity & Accessibility

Equitable Access

The current franchise system contributes to the City's goal of meeting the service needs of the public by requiring taxicab companies to provide sufficient service in all areas of the city. The Zone System allows the city to dictate where cabs operate in order to combat redlining refusing to provide service to someone because they live in an area perceived to be a financial risk (referred to as "redlining"—and ensure access is available in all areas of the city.

Every month, taxicab companies are required to submit data reports to LADOT with the response time information from telephone or equivalent service calls. Until 2015, LADOT compiled data and produced annual reports on the taxi companies' performance to determine how well they were serving the public based on factors such as how long it takes them to answer the phone and how timely they are in arriving at the estimated time.

The annual performance review includes whether the franchisee met vehicle in-service requirements for its service area. To achieve this, the franchisees have implemented incentive programs for their drivers:²⁵

- In 2010, Beverly Hills Cab Co. established the Customer Care Program designed to document and follow-up on any service deficiencies and instituted monthly monetary awards for the driver servicing the greatest number of short trips (under \$10), the driver with the most credit card trips, and the driver with the least amount of trip rejections.
- L.A. Checker Cab addressed service deficiencies in Zone D by increasing bonuses to drivers servicing calls in that area, including \$25 daily bonus to the driver servicing the most calls in this area and a \$10 bonus to each driver that takes a call that has not been responded to within 5 to 15 minutes.
- Independent Taxi ("ITOA") offers a financial incentive to guarantee service to hard-to-service areas, whereby a driver's fare is paid when passengers fail to pay and, if it is a "short trip," the driver gets higher priority on the next trip.

²² L.A. Admin. Code § 22.488(g)(2)(D).

²³ L.A. Municipal Code §71.02.2.

²⁴ *Id.*

²⁵ L.A. Dept. of Transportation, *2014-2015 LADOT Taxicab Review*, January 2017, p. 50.

- To improve service in Zone D of the City, United Independent Taxi Drivers (“UITD”) added an \$8 per trip surcharge payment to the driver for any trip taken from 6:00 AM to 6:00 PM, and a \$10 trip surcharge payment from 6:01 PM. to 5:59 AM in that zone.
- UITD credits drivers \$5 for each Zone D trip, and the vehicle taking the most trips in an underserved area can get an incentive from \$100 to \$1,000 depending on the number of calls completed.
- City Cab periodically implements a bonus to increase service levels in its assigned area.

Access for People with Disabilities

The City is a covered entity under Title II of the Americans with Disabilities Act (“ADA”), and, therefore, may not discriminate on the basis of disability and, upon request, must provide reasonable accommodation to ensure equal access to its programs, services, and activities. To that end, LADOT requires that at least 2% of all franchised taxicab fleets meet the ADA standards for wheelchair-accessible vehicles. Maintaining specific wheelchair accessible and clean fuel vehicles at all times is not presently regulated by the City, rather franchisees stipulate to this as part of the agreement. Under the terms of the current franchise ordinances, the Taxi Commission reserves the power to require that the taxi company increase the minimum percentage of wheelchair accessible vehicles in its fleet and may specify vehicle service availability for general wheelchair accessible trips.²⁶

As part of a grant funding project for additional wheelchair accessible vehicles (“WAVs”) as taxicabs, beginning January 2012, operators were issued 50 WAVs based on their presented need and willingness to commit to this type of service.

According to the most recently available data, for calendar year 2015, taxicab operators made 12,411 wheelchair accessible trip, which is a 73% increase from 2011.²⁷ Average time to accept the trip (8–9 minutes) and total time to complete the trip after on-site arrival (19–21 minutes) remained consistent.

The 2015 annual performance review includes whether the franchisee met vehicle in-service requirements for both wheelchair accessible taxicabs and clean emission vehicles. To achieve this, the franchisees implemented the following incentive programs for their drivers:²⁸

- In 2009, Bell Cab began providing for a \$15 payment, in addition to fares received, for wheelchair trips.
- ITOA supplements driver fares on Cityride passenger discounted trips.
- As of 2013, ITOA pays drivers a minimum fare of \$45 for a wheelchair accessible vehicle trip regardless of the actual fare.
- In 2013, ITOA added internal penalties for wheelchair service refusals, such that a first-time offense would lead to a \$100 fine and three hours out of service, a second offense includes a \$250 fine and three hours out of service, and a third offense results in driver termination.
- United Independent Taxi Drivers (“UITD”) incorporated a wheelchair vehicle rotation system, whereby a certain number of WAVs are assigned for wheelchair service priority each day. They may take other types of calls but must accept wheelchair trips for a particular day.

²⁶ See Franchise Ordinance, Sec. 4.1(a).

²⁷ L.A. Dept. of Transportation, *2014-2015 LADOT Taxicab Review*, January 2017, p. 52.

²⁸ L.A. Dept. of Transportation, *2014-2015 LADOT Taxicab Review*, January 2017, p. 50.

- As of April 2016, UITD provided wheelchair trip incentives of \$5 during the day and more than \$5 at night.

The Cityride Program

LADOT's Cityride Program is a transportation program that allows individuals age 65 or older and qualified persons with disabilities to use subsidies provided by the City to pay for trips provided by City-operated dial-a-ride (DAR) transportation services or franchised taxis.²⁹ Participants may only use the taxicab companies permitted by LADOT to operate in their service area. The DAR program offers curbside-to-curbside shared-ride services to eligible clients in City-owned lift-equipped vehicles.

According to a 2013 LADOT fact sheet, there are approximately 100,000 registered Cityride clients in the program and over 44,000 active members.³⁰

Cityride covers up to \$20 of taxicab trips. The participant is responsible for paying the remainder. Participants may share a ride with someone they know and share the cost using their Cityride Cards.

The Cityride Program is funded by Proposition A, Local Transit Assistance (PALTA) funds and administered by the LADOT with the assistance of the City of Los Angeles Department of Aging. The program supplements the federally mandated paratransit transportation program for person(s) with disabilities in Los Angeles County operated by Access Services Inc. (ASI).

Traffic Congestion Reduction & Mitigation; Emissions Reduction

The current system does not particularly contribute to mitigating or reducing traffic congestion. Notably, the taxi industry in Los Angeles is very small. In 2017, there were 2,361 taxicabs, compared to 7,762,453 total vehicles in the greater Los Angeles area. While LADOT is able to control the number of taxicab vehicles operating in the City by setting the maximum number of cabs that a franchisee may operate. However, given the relatively low numbers of taxicabs operating in the City, capping the fleet size does not reduce or mitigate traffic congestion. There are currently no requirements for low or zero-emission vehicles. In addition, the current system does not encourage ridesharing.

Expanding Economic Opportunities & Fostering Innovation

The current franchise system has not expanded economic opportunities for the for-hire vehicle industry or fostered innovation within that industry. If anything, the franchise system has stymied both. The system strongly favors incumbents. The last time the City re-bid taxicab franchises was in the year 2000. The current franchises became effective on January 1, 2001 and have remained effective through a series of extensions granted by the City Council based on annual performance reviews by the Taxicab

²⁹ See L.A. Dept. of Transportation Transit, *Cityride*, <https://www.ladottransit.com/other/cityride/> (last visited Oct. 5, 2018).

³⁰ See L.A. Dept. of Transportation, *Cityride Fact Sheet*, Aug. 18, 2013, available at https://www.ladottransit.com/pdf/Cityride_Fact_Sheet_8-18-13.pdf.

Commission. Over the years, there has been little change in the cab companies that have been awarded franchises.³¹

In addition, while TNCs, unconstrained by many of the regulations imposed on taxicabs, have been innovating for-hire vehicle practices, taxicabs have been constrained by regulations having to do with trade dress, fare-setting and other areas of business. The specificity of regulations applying to taxicabs but not to TNCs may be hindering innovation in the taxicab industry.

Adaptable to New Technology

The franchise system allows the City flexibility to alter service requirements during the franchise period to account for changes in technology.³² For example, ordinances have been used to require enhanced technology. However, the specificity of regulations on taxicabs is likely hindering taxicab companies from leading on adoption of new technology.

Providing a More Stable & Level Playing Field

The current franchise system does not reconcile the taxicab regulatory framework with other for-hire vehicle sectors, namely TNCs. Taxi drivers, vehicles, and operators are subject to higher regulatory standards and requirements in Los Angeles than TNCs are subject to at the state level. TNCs benefit from the lighter and different regulatory approach, and their growth has led to declining taxicab revenue and service.

³¹ Currently, nine cab companies have franchises to operate in the City: United Independent Taxi, United Taxi of San Fernando Valley, Yellow Cab, Bell Cab, Beverly Hills Cab Company, LA Checker Cab, City Cab, Independent Taxi, and United Checker Company.

³² See, e.g., Franchise Ordinance, Sec. 4.0, 4.3, 4.5.

2.B Transportation Network Companies and Bandit/Unlicensed Operations

The Impact of TNCs on the Taxi Industry

In 2013, California became the first state in the nation to regulate technology-based for-hire services Uber, Lyft, and SideCar.³³ For regulatory purposes, these companies were put into a new category of “Transportation Network Company” (“TNC”) that is overseen by the California Public Utilities Commission (“CPUC”). These services are also commonly referred to as ridesourcing or ridehailing. Under terms of the CPUC ruling, TNCs are allowed to provide service statewide as long as they obtain a permit from the CPUC and adhere to certain operating requirements.³⁴ In addition to CPUC licensing, TNCs and drivers may be subject to airport permit requirements to operate at various airports and local business registration requirements.

In October 2017, the California legislature [passed a measure](#) (SB 182) allowing TNC drivers to file for a single business license that works in each of the state’s 482 municipalities, regardless of the number of local jurisdictions in which the driver operates.³⁵ The Legislature passed this law based on its finding that that “allowing the free operation of drivers for transportation network companies across local jurisdictions is a matter of statewide concern and is not a municipal affair.”³⁶ The law allows drivers to register in the town of their residence alone, rather than requiring them to obtain separate business licenses—and pay the annual fees—for each city in which they work.³⁷ If the local jurisdiction does not require a business license to operate as a driver for a TNC, then the driver is not required to obtain a business license for any other jurisdiction.

Since the arrival of TNCs in Los Angeles, taxi ridership in the city has declined by 51% between March 2013 (peak ridership) and March 2017 (latest data available). If we were to extrapolate the data from March 2017 to November 2018, the percentage of decline would be a staggering 77%. This assumes a linear and constant rate of decline. This is consistent with trends observed in other cities such as New York City and Chicago. Note that we have chosen November 2018 was chosen as the end point to coincide with the month for which a snapshot of TNC trips in Downtown LA is available. This analysis is shown in Figure 4.

³³ Cal. Pub. Utilities Commission D.13-09-045.

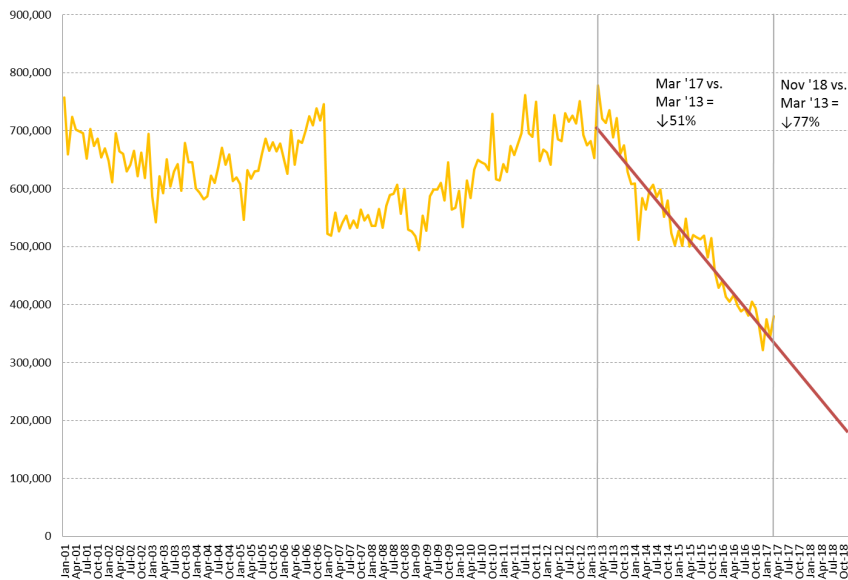
³⁴ Cal. Pub. Utilities Commission D.13-09-045.

³⁵ Senate Bill No. [182](#), Oct. 13, 2017; added Stats 2017 ch 769 § 1 (SB 182), effective January 1, 2018.

³⁶ Cal. Bus. & Prof. Code § 16550.2.

³⁷ Cal. Bus. & Prof. Code § 16550.2.

Figure 4: Taxi Trips per Month over Time



Based on data obtained from Teralytics, the number of TNC trips in the Downtown Los Angeles area of interest³⁸ in November 2018 was approximately 7,958,750.³⁹ The comparable number of taxi trips in the same area is roughly 4,354.⁴⁰ The number of TNC trips, at least in the downtown area of interest, is roughly 1,828 times those of taxis.

Taxi fare revenue, on the other hand, has declined by 34% between March 2013 and March 2017, shown in Figure 5. This is lower than other major cities over the same period (2013-2017), with the exception of New York City, as shown in Table 1.

³⁸ We have included trips “within” (start and end within Downtown LA) and “from” (start in Downtown LA and end outside)

³⁹ This is calculated as follows:

Monthly TNC trips = (Weekend Days/Month)*(Weekend Daily Trips) + (Week Days/Month)*(Weekday Daily Trips)
= (8)*(252,187) + (22)*(270,057) = 7,958,750

⁴⁰ This is calculated as follows:

- Number of Zone C trips in February 2017 = 37,861
- Number of Zone C trips in November 2018 = 0.23*37,861 = 8,708
- Number of trips in Downtown LA = 0.5*8,708 = 4,354

Figure 5: Fare Revenue per Month Over Time

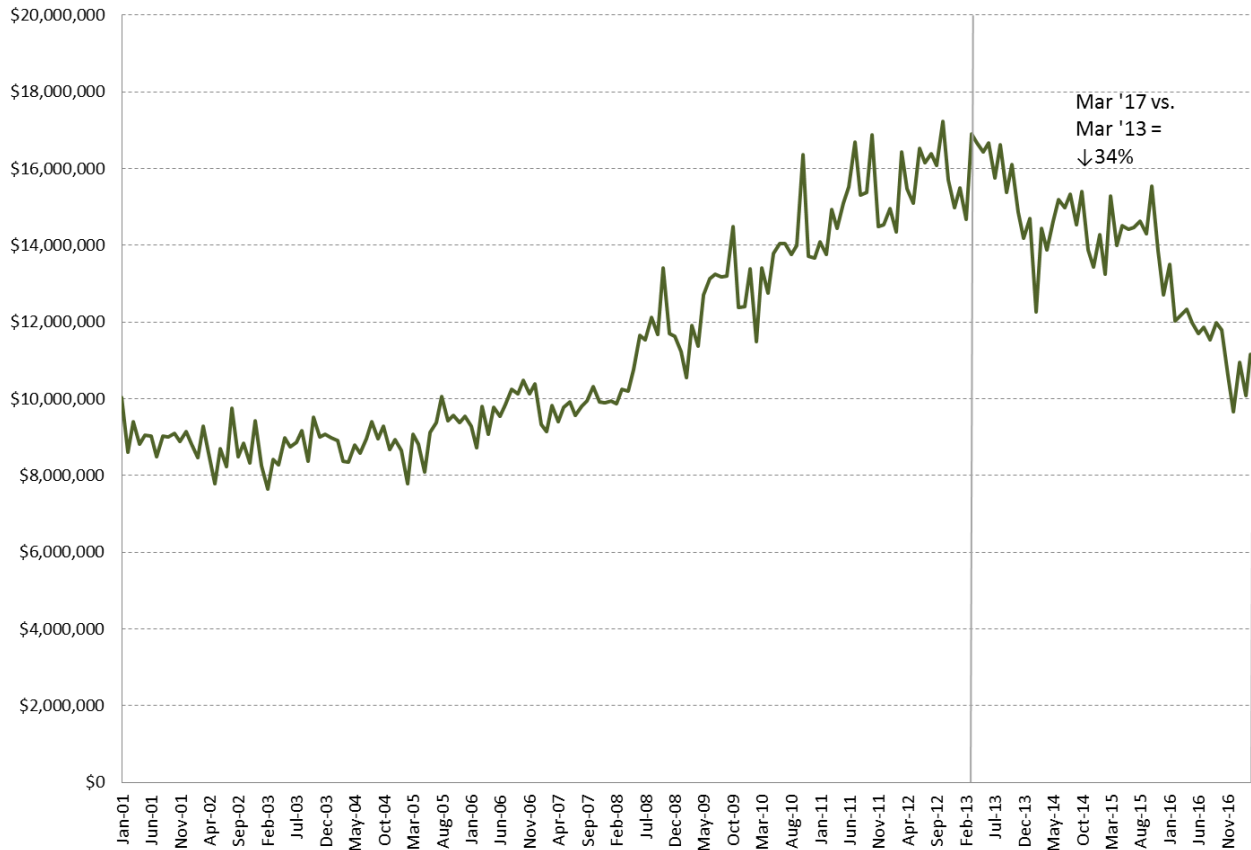
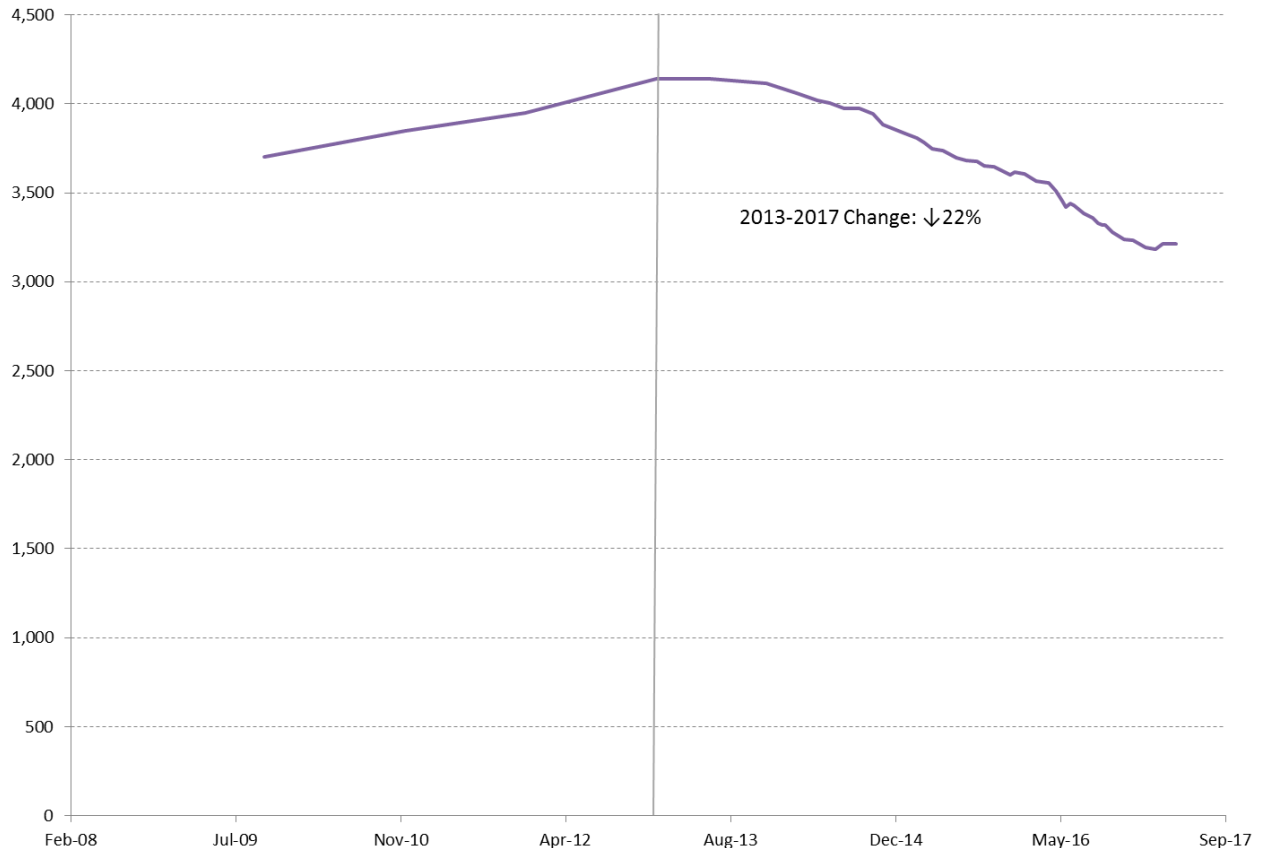


Table 1: Comparison of Fare Revenue Decline in Different Cities

City	Fare Revenue	Data Source
New York City	↓29%	NYC Taxi & Limousine Commission trip data
Chicago	↓47%	City of Chicago
Philadelphia	↓45%	Right to Know Request No. 17-0181
Boston	↓53%	Boston Herald

The number of taxi drivers has declined by 22% between 2013 and 2017 (data through April), as shown in Figure 6. This is not surprising since taxi drivers are likely lured by the popularity of ride-hailing companies and its lower overhead costs, including no vehicle leasing fees. The number of taxi drivers, however, seemed to have stabilized by early 2017.

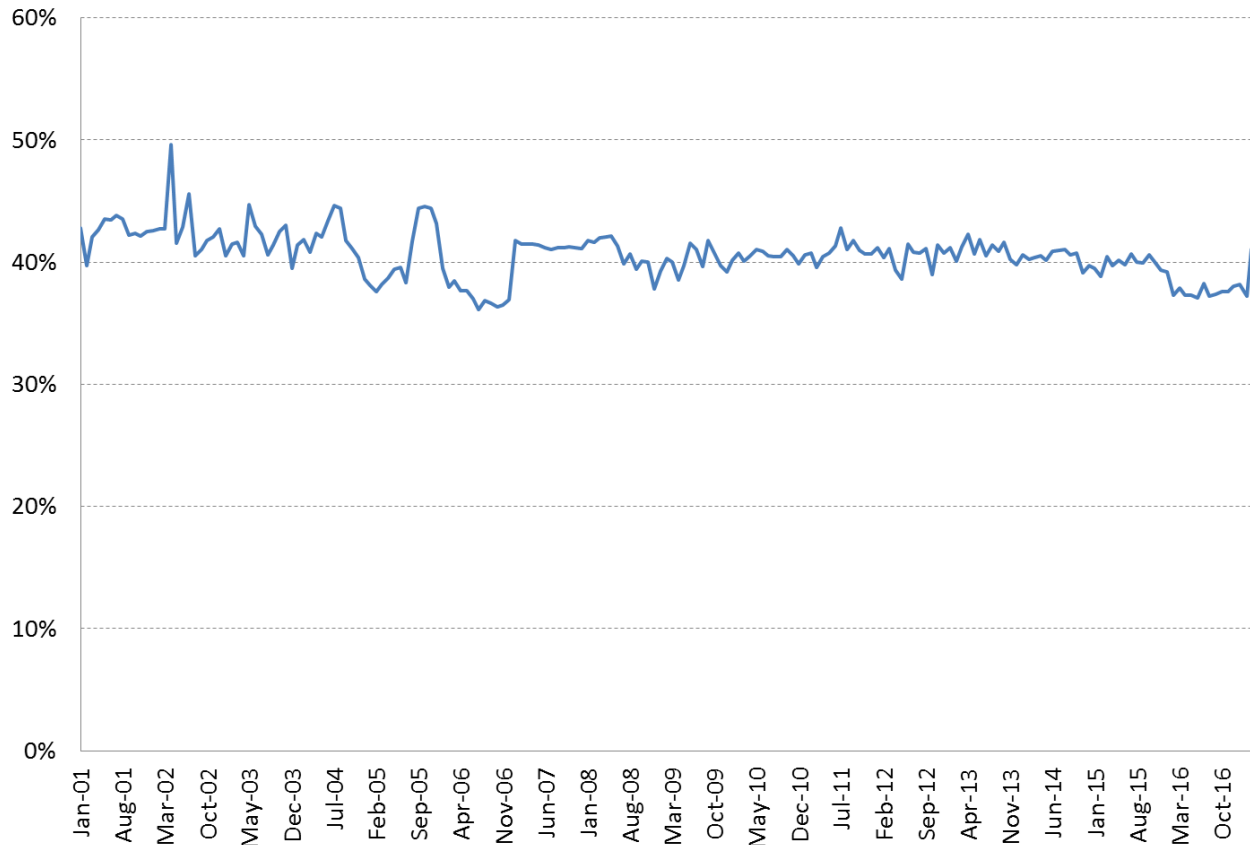
Figure 6: Taxi Driver Count over Time



The utilization rate measures the amount of time taxi drivers have passengers in their vehicle. In LA’s case, the utilization rate for taxi drivers has been relatively constant since 2009, hovering around 40%. Between February 2016 and February 2017, there was a noticeable drop, but the number went up again in March 2017. This trend is shown in Figure 7. There is, nonetheless, ample room for improvement. In

New York City, the utilization rate across the entire industry for both taxis and other FHV is 59% for June 2018.⁴¹ For taxis specifically, the number is around 66%.⁴²

Figure 7: Taxi Utilization over Time



Bandit Cabs

Under the revised California State law, a taxi company that is duly permitted in a city or county is allowed to “provide prearranged trips anywhere within the county in which it has obtained a permit.”⁴³ A “prearranged trip” means a “trip using an online enabled application, dispatch, or Internet Web site.”⁴⁴ Illegal street hails and pickups by taxis licensed in other jurisdictions will no longer exist.

⁴¹ See NYC Taxi and Limousine Commission and Department of Transportation, Improving Efficiency and Managing Growth in New York’s For-Hire Vehicle Sector (June 2019), at page 21.

https://www1.nyc.gov/assets/tlc/downloads/pdf/fhv_congestion_study_report.pdf

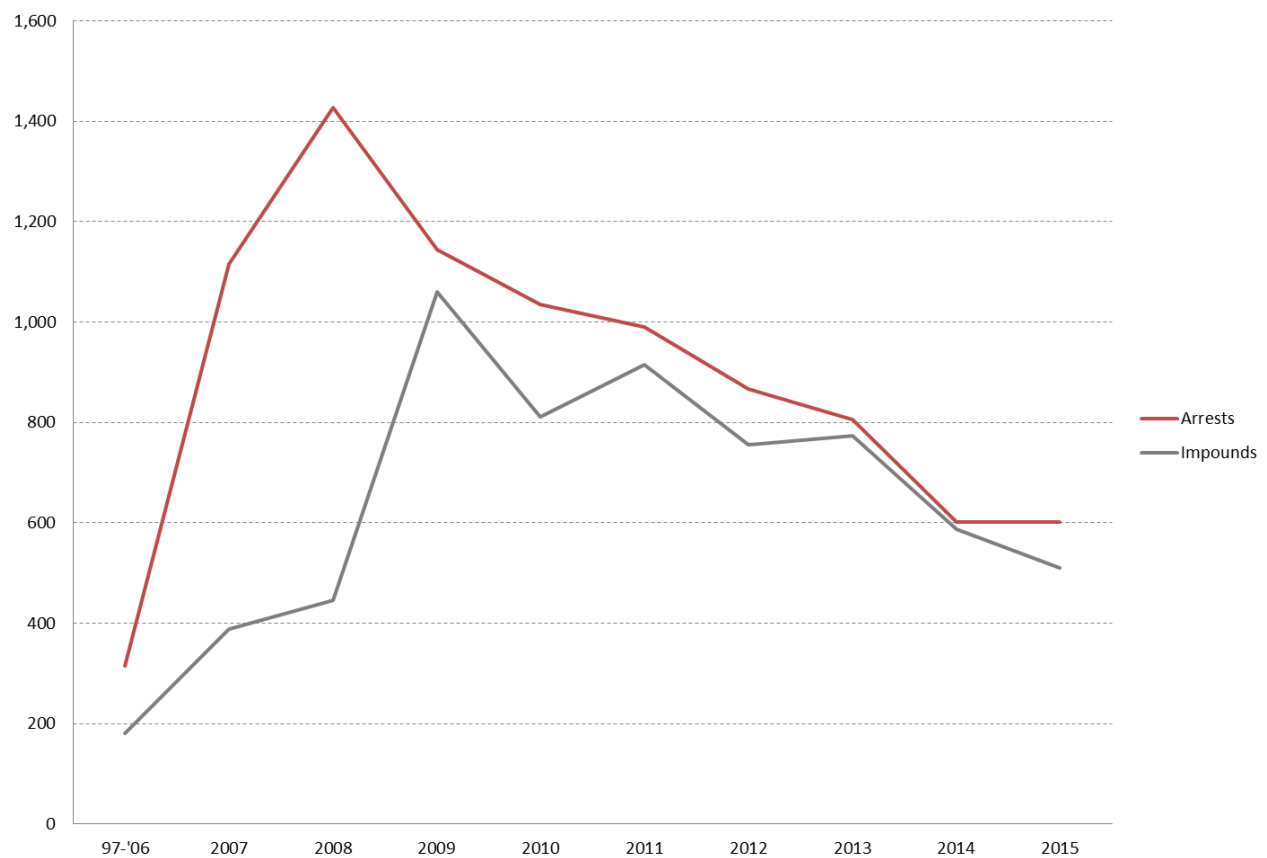
⁴² Calculated as 7.9 average occupied taxi trip hours per day divided by a standard shift of 12 hours.

⁴³ See Cal. Gov. Code §§ 53075.5(f) and (i). Under Section § 53075.5(k) of the Government Code, a taxicab company will be considered “substantially located” in a city or county where either (i) the company has its primary business address; or (ii) the largest share of the company’s total number of trips (prearranged and non-prearranged) originated. If the company first started operating after January 1, 2019, then it will be considered substantially located in the jurisdiction where its primary business address is located during the first year of operations. After the first year, a company may be substantially located either where its business is located or where it provides the majority of its trips. A taxicab company may be substantially located in more than one jurisdiction.

⁴⁴ See Cal. Gov. Code § 53075.5(k).

There are 2,344 licensed cabs as of March 2017. Based on an estimate in 2016, there are roughly 3,000 unlicensed or “bandit” cabs. Bandit cabs are not supposed to operate on the streets. In addition to these, there are TNCs that pick up passengers illegally through street hails (TNCs are only allowed to accept rides through the app). Not surprisingly, since Uber and Lyft began their operations in LA, the percentage of bandit arrests comprising of TNCs had risen significantly from 4% in 2013 to 40% in 2016 (over 240 arrests). Given the high volume of trips completed by TNCs (see previous section), the number of illegal hails would be expected to increase markedly over the past few years. However, due to reduced LADOT workforce from 2011 to 2016, the number of arrests and vehicle impounds have gone down, when it would have been expected to increase, as shown in Figure 8.

Figure 8: Bandit Cab Arrests and Vehicle Impounds



Operating Requirements for Taxis Licensed in Other Jurisdictions

Under the revised Government Code § 53075.51, since January 1, 2019, regardless of whether a taxicab company or taxicab driver is substantially located within its jurisdiction, cities and counties will be allowed to adopt operating requirements for taxicab companies and taxicab drivers that are not related to permitting or business licensing, such as public health, safety, or welfare ordinances relating to taxicabs.⁴⁵

⁴⁵ See Cal Gov’t Code § 53075.51(a)(3).

Under the law, the City will be allowed to “limit the number of taxicab companies that may use taxi stand areas or pickup street hails” within City limits.⁴⁶ If the City chooses to limit the number of taxis that use the stand areas or pick up street hails, then state law requires it to identify those vehicles with a window sticker and not impose additional requirements or costs beyond that authorized by Section 53075.5. State law will also allow the City to impose requirements on taxicab companies to provide services “in a manner that provides equal accessibility for all populations within the jurisdictional boundaries of the city or county.”⁴⁷

⁴⁶ See Cal Gov’t Code § 53075.51(a)(1).

⁴⁷ See Cal Gov’t Code § 53075.51(a)(2).

2.C Peer City Review

A peer review of regulations, policy considerations, and accepted practices regarding the taxicab and for-hire industry supports the ultimate goal of producing an assessment for the Taxicab Commission of Los Angeles and Los Angeles Department of Transportation (“LADOT”) regarding the future of taxicab regulations in response to challenges arising from shared mobility and on-demand for-hire vehicle services. The review includes benchmarking jurisdictions comparable to Los Angeles.

This review is based on research and surveys of cities in the United States, Canada, Europe, and the Middle East that have implemented regulations, policies, or accepted practices regarding taxicabs and for-hire vehicles in one or more of the five guiding principles that were provided by LADOT:

- Improving transportation equity and accessibility
- Reducing traffic congestion; emissions reduction
- Expanding economic opportunities and fostering innovation
- Openness/flexibility to new technology
- Reconciling the regulatory frameworks among the various for-hire vehicle sectors (*i.e.*, “leveling the playing field”)

The following jurisdictions were selected for review:

- Abu Dhabi, United Arab Emirates
- Arlington, Texas
- Chicago, Illinois
- Dubai, United Arab Emirates
- Helsinki, Finland
- Houston, Texas
- Kansas City, Missouri
- London, England
- New York, New York
- Seattle, Washington
- Washington, D.C.

The regulatory frameworks of these jurisdictions vary, allowing for a comparison of approaches. Additionally, policies and regulations are compared strictly by guiding principle and represent varying levels of authority across jurisdictions—including national and state-level government—that may be outside LADOT’s jurisdiction. For example, New York City, Seattle, Chicago, Helsinki, and the UAE states each have jurisdiction over TNCs, which are currently outside LADOT’s jurisdiction.

The peer review informs the recommendations made throughout the report. Table 2 provides a synthesis, while the full text is located in appendix 7.A. The synthesis table is for comparison purposes only and is not intended to be used as specific policy recommendations for the City of Los Angeles.

Table 2: Comparison of Taxi-Related Regulations Across Peer Cities by Guiding Principle

Guiding Principle	Improving Transportation Equity and Accessibility	Reducing Traffic Congestion	Expanding Economic Opportunities and Fostering Innovation	Openness/Flexibility to New Technology	Reconciling Regulatory Frameworks/Leveling the Playing Field
<p>Abu Dhabi, UAE Abu Dhabi Integrated Transport Center (ITC)</p>	<p>Accessibility: Persons with disabilities receive 50% discount on taxi fares</p>	<p>Plans to establish a UAE-wide integration of all inter-city transport information and services. Vehicle Cap: Regulator determines taxi fleet size and operators must obtain authorization to add vehicles to their fleets.</p>	<p>No applicable policies.</p>	<p>No applicable policies.</p>	<p>Ridesourcing/TNCs are regulated the same as taxis and other private-hire vehicles and must obtain a franchise to operate. All drivers and vehicles are subject to same licensing standards.</p>
<p>Arlington, TX Arlington Handitran</p>	<p>Equity: Partnership with Via to provide subsidized on-demand ridesharing service for \$3/ride in select areas.</p>	<p>Vehicle Cap: Taxis and other regulated vehicle operators must obtain a certificate of public convenience and necessity before providing service. High Demand Events: Pedicabs and Neighborhood Electric Vehicles operate during sporting and other high-attendance events.</p>	<p>No applicable policies.</p>	<p>Autonomous Vehicles: Fully autonomous shuttle service provided by Drive.ai offers free pickup and drop-off at select locations, including employment centers, restaurants, entertainment venues, public recreational spaces, and the Arlington Convention Center.</p>	<p>No applicable policies.</p>
<p>Chicago, IL Chicago Department of Business Affairs and Consumer Protection (BACP)</p>	<p>Accessibility: Accessibility Fund provides taxi medallion licensees a reimbursement to support the conversion of taxicabs to wheelchair accessible vehicles. Equity: Underserved Areas Tax Credit gives taxis and ridesourcing/TNCs a financial incentive (\$98/month for taxis; \$0.60/trip for TNCs) to service areas with high levels of “transit</p>	<p>Vehicle Cap: Fixed number of taxi medallions (closed market).</p>	<p>No applicable policies.</p>	<p>No applicable policies.</p>	<p>New laws to reduce regulatory burdens and provide financial relief to the taxicab industry. “Taxi Fairness” reforms reduced credit card fees, revenue sharing rules for vehicle advertisements, and streamlined training and enforcement process for drivers. Unmetered Rates: Taxis may diverge from metered</p>

	dependent populations” and underserved areas.				rates and offer flat fare rates or lower fare rates on trips booked through an app.
Dubai, UAE Dubai Roads and Transport Authority	Accessibility: Special Needs Taxi service can be reserved 24 hours in advance and is available at the airport taxi stands.	No applicable policies.	No applicable policies.	No applicable policies.	Ridesourcing/TNCs are regulated the same as taxis and other private-hire vehicles and must obtain a franchise to operate. All drivers and vehicles are subject to same licensing requirements.
Helsinki, Finland Finnish Transport and Communication Agency	No applicable policies.	No applicable policies.	Deregulation: Removed quotas set by the authorities, geographic restrictions, and maximum prices. Taxi entrepreneurs are free to enter and leave the market, to operate anywhere in the country, and to determine their fares. MaaS: Mobility service providers are required to provide open interfaces to their apps to enable customers to purchase tickets and pay for services across transportation modes.	Mobility service providers are required to make essential data public for service development.	Opened the taxi industry to ridesourcing/TNCs; there is no distinction between the two.
Houston, TX Houston Department of Administration and Regulatory Affairs (ARA)	Accessibility: If the number of wheelchair accessible taxicabs falls below 2% of the entire taxicab fleet, then all available vehicle permits in that allotment will be designated for wheelchair accessible vehicles.	Curb Management: Designated streets where the stopping, standing, or parking of vehicles would create an especially hazardous condition or would cause unusual delay to traffic. “Hailing Cab” icon signs mark that particular site as a three-minute zone where taxis can	Established a flat \$6 rate for taxi trips entirely within the central business district.	No applicable policies.	Suspended business experience requirements that taxi companies have, within the preceding ten years, at least five years of such experience, with at least two of those years in Houston.

		<p>briefly stop to pick up and drop off passengers. Doubled the number of cab stands in the downtown area to make it easier to get a cab. Driver Relief Stands: There are more than 21 cabstand locations where drivers can “stand” and wait for a fare.</p>			
<p>Kansas City, MO Kansas City Department of Neighborhood & Housing Services, Regulated Industries Division</p>	No applicable policies.	No applicable policies.	Taxicabs operate on an open market permit system, allowing companies to enter and leave the market as they wish, provided they meet minimum criteria.	No applicable policies.	No applicable policies.
<p>London, U.K. Transport for London (TfL)</p>	<p>Accessibility: All taxis are wheelchair accessible, and taxi drivers are obliged to take wheelchair users.</p>	<p>Managed Lanes: Taxis may use bus lanes.</p>	Taxis may obtain approval to install aftermarket equipment and/or modify existing equipment in licensed taxis and PHVs that allow operators to engage in advertising campaigns and to test new technology.	No applicable policies.	Limited license periods for TNCs and initial regulations to obtain a license.
<p>New York City NYC Taxi & Limousine Commission (TLC)</p>	<p>Equity: Taxis may not refuse to transport passengers to any destination within NYC or surrounding counties. Green Taxis (Street Hail Liveries) are allowed to pick-up passengers only in the outer boroughs and upper Manhattan. Accessible License: Certain medallions are designated for use only by wheelchair accessible vehicles (WAVs).</p>	<p>Curb Management: FHVs and taxis may stop in “no parking” or “no standing zones” to pick up or drop off passengers and may double park if there is no curb space available. Vehicle Cap: The total number of taxi cab medallions is capped at 13,587. In August 2018, the City implemented a one-year ban on issuing any new for-hire vehicle</p>	No applicable policies.	The TLC uses pilot programs to test new technology.	Unmetered Rates: 2-year pilot program allows taxis to offer non-metered upfront rate to passengers who book through an app.

	<p>Accessibility Fund: There is a \$0.30 WAV Improvement Surcharge added to each taxi trip.</p> <p>The Taxi Improvement Fund gives vehicle owners up to \$14,000 to offset purchase costs of a WAV plus up to \$4,000 per year for four years (up to \$30,000 total over four years). Drivers may receive \$1.00 per trip completed in a WAV, even if the passenger is not a wheelchair user. Drivers can earn an additional dispatch fee payment of up to \$30 for traveling to the passenger pickup under the NYC Accessible Dispatch Program.</p>	<p>licenses—TNCs, black cars, limos—unless the vehicle is wheelchair accessible.</p> <p>Congestion Surcharge: Congestion surcharge (tax) on taxi and FHV trips that start, end, or travel through Manhattan south of 96th street. \$2.50 per taxi trip, \$2.75 per FHV trip, and \$0.50 per pooled vehicle passenger.</p> <p>Congestion Pricing: Starting in early 2021, motorists will be charged a fee to enter Manhattan south of 60th street.</p>			
<p>Seattle, WA Seattle Department of Finance and Administrative Services</p>	<p>Accessibility Fund: A \$0.10 per trip surcharge is applied to all taxi, for-hire vehicle, and TNC trips that begin in the city that is used to offset the higher operational costs of wheelchair accessible taxi (WAT) services for owners and operators.</p> <p>Accessible License: WAT or wheelchair accessible for-hire vehicle licenses are not subject to the vehicle cap.</p> <p>Accommodation: TNCs are required to provide an option for customers to request a WAT.</p>	<p>Vehicle Cap: The total number of taxicab licenses in effect at any one time is capped at 1,050. The Director may add up to 100 additional licenses per year as necessary to meet demand.</p> <p>Curb Management: Curbs are color coded to delineate parking, loading, and standing regulations. Bus stops are also designated by curb color. Three-minute passenger loading zones, designated by white curbs and signage, located throughout the city for brief stops to pick up and drop off passengers.</p>	<p>No applicable policies.</p>	<p>No applicable policies.</p>	<p>Unmetered Rates: Metered rates do not apply when the taxi is operating on an app-dispatch system. App-dispatch rates must be filed with the Director and transparent to riders prior to booking.</p>



<p>Washington, DC D.C. Department of For-Hire Vehicles (DFHV)</p>	<p>Equity: DFHV uses pilot programs to test service to areas underserved by taxis and/or lacking public transportation. Accessibility Rule: Each taxi and black car company with 20 or more taxicabs in its fleet is required to dedicate at least 20% of its fleet to wheelchair-accessible vehicles by December 31, 2018. Wheelchair accessible vehicles are exempt from compliance with greenhouse gas emission standards.</p>	<p>Managed Lanes: Taxi operators are allowed to use designated bus lanes if they are carrying passengers. TNCs are prohibited from using bus lanes at any time, even if they are carrying passengers.</p>	<p>The DFHV invests part of its budget to encourage innovation in the taxi and FHV industry by making grant opportunities available that encourage eligible companies to use funding to test new types of service that solve transportation problems for stakeholders and also generate new rides into the FHV industry. MaaS: D.C. is building a universal solution for mobility across the city that includes taxis and TNCs.</p>	<p>Autonomous Vehicles: Interagency AV Working Group comprised of D.C. agencies focused on transportation, disability rights, environmental issues, and public safety.</p>	<p>Unmetered Rates: Metered rates do not apply when the taxi is operating on an app-dispatch system and may be set by the app-dispatch company.</p>
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2.D Reciprocity

State Regulation of Taxicab Reciprocity in California

California recently amended the Taxicab Transportation Service Law to move “taxicab permitting from the patchwork of various local requirements to require a permit in the jurisdiction where taxicab transportation services have the most substantial connection” to limit the number of localities in which a taxicab company would be required to obtain a permit.¹ Up until December 31, 2018, every city or county was required to adopt an ordinance or resolution regulating taxicab transportation services.² As of January 1, 2019, that requirement applies *only* to a city or county in which a taxicab company is “substantially located.”³ In addition, duly-permitted taxi companies will be allowed to “provide prearranged trips anywhere within the county in which it has obtained a permit.”⁴ For the purposes of Government Code § 53075.5, “prearranged trip” means a “trip using an online enabled application, dispatch, or Internet Web site.”⁵

Since January 1, 2019, Government Code § 53075.5 has allowed cities and counties to accept a “taxicab company or driver permit issued by another city or county as valid, and may issue to that taxicab company an inspection sticker or photo permit that authorizes that taxicab company or driver to operate within the county.”⁶ The law also contains minimum uniform requirements for licensing drivers across the state, including a mandatory controlled substance and alcohol testing certification program (a test in one jurisdiction must be accepted as meeting the same requirement in any other jurisdiction) and a fingerprint-based criminal history check.⁷ In addition, with respect to driver safety and training, all licensing jurisdictions must require taxicab companies to:

- Participate in the pull-notice program pursuant to Section 1808.1 of the Vehicle Code to regularly check the driving records of all taxicab drivers, whether the drivers are employees or contractors;
- Maintain a safety education and training program in effect for all taxicab drivers, whether they are employees or contractors;
- Maintain an accessibility education and training program to instruct its taxicab drivers on compliance with the federal Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12101 *et seq.*) and amendments thereto, and state disability rights laws, including making clear that it is illegal to decline to serve a person with a disability or who has a service animal; and
- Provide for a taxicab driver fingerprint-based criminal history check and a drug and alcohol testing program.

The revised law eliminates the need for reciprocity agreements. Los Angeles is now required by state law to allow taxicabs duly licensed elsewhere in the County of Los Angeles (the “County”) to provide prearranged trips within the city limits and vice versa. The City will be able to regulate the operations of any taxis operating within the city limits, as long as the regulations are not related to permitting or business licensing. The City will also have the authority to accept a taxi company or driver permit issued by any other jurisdiction in the state (reciprocity licenses) without entering into any reciprocity agreement with that jurisdiction. There is no need to enter into any reciprocity agreements; the City may simply choose to accept taxi driver and/or company permits issued by other jurisdictions as valid for operating within Los Angeles.

However, the City will need to amend its own rules and regulations governing taxicab transportation to not conflict with the new state law. For example, the existing Los Angeles City regulations governing taxicab transportation, Chapter 7 of the Los Angeles Municipal Code (the “L.A. Code”), provide that no “person or corporation or membership organization shall drive or operate a

taxicab without a franchise granted by the City of Los Angeles,” irrespective of whether the operations extend beyond City limits.⁸ Moreover, the L.A. Code makes it a misdemeanor to operate “as a taxicab company or an individual taxicab without having a valid vehicle permit and franchise granted by the City of Los Angeles.”⁹ The City’s current regulations do not allow taxicab companies from other areas of Los Angeles County to provide any service—prearranged or by street hail or walkup at a taxi stand—within the City. This conflicts with the mandatory reciprocity elements of the revised Government Code § 53075.5.

The California Constitution provides each city with the same power as the California State Legislature to adopt and enforce ordinances regulating municipal affairs.¹⁰ However, a city may not adopt ordinances that conflict with state law. By passing AB 1069, the State Legislature made clear its intent to preempt local regulation regarding taxicab permitting and business licensing by establishing a statewide regulatory structure that leaves no room for local regulations. These changes to the state law address a matter of “statewide concern and not a municipal affair,” and therefore apply equally to all cities.¹¹ While Los Angeles is able to impose operating requirements for taxicab companies and drivers that do not relate to permitting or business licensing, any local regulation that conflicts with the state law will not be enforceable.

Impact of Reciprocity with Neighboring Jurisdictions on the Los Angeles Taxi Market

Los Angeles County is made up of 88 incorporated cities and approximately 140 unincorporated communities.¹² The Los Angeles County Business Commission has licensing authority for taxicab operators, drivers, and vehicles in all unincorporated areas of the County, and for the contract cities of Malibu, Santa Clarita, and Westlake Village.¹³ The other 85 incorporated cities, including LA, have their own regulations. Under the revised law, every jurisdiction with licensing authority within the County is allowed to adopt and enforce ordinances regulating taxicab companies substantially located within their jurisdictional boundaries only and will be required to allow taxicab companies duly licensed elsewhere in the county to provide prearranged service in their jurisdiction.

LADOT does not have data regarding service outside the City limits by franchisees. However, since January 1, 2018, taxicab companies have been required by state law to collect data showing the total number of prearranged and non-prearranged trips that originate in a particular jurisdiction for the purposes of determining where the company is substantially located.¹⁴ Starting January 1, 2019, the trip data collected in the previous 12 months must be provided upon date of renewal to the jurisdictions in which the taxicab company and taxicab driver are substantially located.¹⁵ LADOT will have access to this data.

The long-term impact of reciprocity with neighboring jurisdictions on the Los Angeles taxi market is unknown. However, in the immediate future, the City should have an influx of additional taxicabs to provide services, and the City will be able to divert resources from enforcement of unauthorized taxicabs. At the same time, the City may also experience a loss of revenue from the elimination of the fines for violations of the existing code.

3. Customer and Stakeholder Input

3.A Summary of Stakeholder Meetings

There is a wide range of stakeholders involved in, influenced by, or affected by for-hire regulation. These stakeholders can have a variety of similar and differing roles, such as: 1) providing transportation services; 2) providing services for older adults and people with disabilities; and 3) regulating transportation services, in a variety of contexts. Between August, 2018 and October, 2018, the Sam Schwartz team engaged stakeholders representing taxi operators, TNCs, Los Angeles World Airports (LAWA), AccessLA Paratransit Services, and the Los Angeles City Council. This section summarizes key findings for these stakeholder engagement efforts.

Taxi Operators

Stakeholder interviews for this study began with the taxi companies, as they will be most directly impacted by any regulatory policy decisions made by LADOT. On August 16th and 17th, 2018, Matthew Daus from Windels Marx and Adam Cohen, an independent consultant, conducted six expert interviews of franchise stakeholders. Interviewees included representatives from Bell Cab, Beverly Hills Cab, City Cab, ITOA, LA Checker, MTS Management Inc., UCC, United Independent Taxi, TM-MTM Inc., and Yellow Cab.

All of the stakeholders interviewed agreed that the Los Angeles taxi market has notably declined in recent years since the advent of TNCs. One company reported a decline of approximately 140,000 monthly street hails and 30,000 monthly radio dispatches since 2014. Other operators reported that ridership has fallen by approximately 40-70% over the last five years. Numerous companies noted that very few drivers bother to work the night shift anymore and that taxis now operate almost exclusively during the daytime. However, on a per driver basis there were differences in opinion on the degree to which TNCs have impacted driver revenue. Interviewees expressed that individual driver revenue has declined from 10% up to \$1,000 per a month. Most interviewees stated that their companies were responding by reducing night service, shifting more trips to the airport (when able), and increasing medical transportation. In general, there was tacit agreement among interviewees that emphasis on niche markets, such as airports and medical transportation, although necessary for survival has hastened the decline of the overall taxi market due to poorer levels of performance as an increasing number of taxi consumers are unable to get a taxi within a reasonable amount of time. According to interviewees, by chasing reliable revenue sources such as airport, daytime trips, and medical transportation, taxis in the Los Angeles market have become unevenly distributed, both spatially and temporally. This has resulted in poorer performance and high cancellations. According to one operator, taxi cancellations averaged approximately 15-16% in July 2018. Although this operator reported that ~65% of pre-arranged hails were new callers, very few passengers returned.

In addition to poor service availability issues, numerous stakeholder interviews identified other trends contributing to the ongoing challenges of the local taxi market. A number of interviewees noted that taxi pricing was higher than TNCs and that local congestion adds to overall meter anxiety. Vehicle retirement issues and concerns over continued loss of business have prevented interviewees from wanting to renew or buy new vehicles, and drivers are often stuck- unable to switch to other franchises. Additionally, many interviewees noted that as the number of taxi passengers and revenue has fallen, poor driver behavior, such as meter zapping and long-hauling, may be increasingly prevalent and causing bad customer experiences.

In general, interviewees expressed a strong interest to innovate and adapt as an industry. There was generally a feeling that the local taxi industry succeeds and fails together and that all potential solutions should be considered. However, governance within their organizations (such as required buyouts from members) has proven to be a hurdle to innovation. All stakeholders interviewed supported a common taxi application, although one interviewee was skeptical if it would help improve taxi availability and dispatching performance.

Other areas of common interest included:

- **Wheelchair Access:** There was also interest at improving wheelchair accessible vehicle (WAV) service if additional subsidies were available. In general, WAVs were viewed by a few franchises as a loss leader because fares aren't quite high enough to pay for the vehicles.
- **Simplified Fare Structures:** Generally, there was support for digital fare zones and flat rates to improve consumer transparency and reduce driver cheating (particularly if peak-hour or congestion rates could be incorporated).
- **Insurance:** Additionally, there was some interest in tweaking insurance requirements such as increasing the deductible to \$50,000 and changing insurance requirements to model TNC insurance models that reduce or eliminate the need for commercial license plates and insurance policies and/or provide reduced insurance requirements when a driver is awaiting a passenger hail or dispatch. There was some interest in reducing overall insurance costs.
- **The Desire to Mimic State TNC Regulations at the Local Level:** There was a lot of interest in mimicking many state-level TNC regulations at the local level to reduce regulatory hurdles and level the playing field. However, all interviewees expressed the desire to retain drug and alcohol testing, fingerprinting, and background checks. **There was also a desire indicated by some, if legally possible, for LADOT to use curb space authority over the streets to cap or limit the number or impact of TNCs locally.**

Areas where there was not consensus included:

- Uncertainty about the implications of AB 1069 implementation (e.g., concern about the lack of minimum prices, etc.);
- Whether a medallion system or other permit should be implemented or replace a franchise system;
- Whether the number of cabs should be limited; and
- If the LADOT Taxi Commission Board should be eliminated in its entirety.

TNCs

TNC interviews consisted of transportation policy directors and government affairs liaisons for Lyft and Uber. Both companies expressed support for LADOT's goals of moving toward shared mobility in order to reduce congestion and emissions and prioritizing customer experience. However, they questioned the blanket goal of electric vehicles, as a high number of occupants in a gas-powered car may be preferable to fewer occupants in an electric car from an environmental perspective.

Since TNCs are regulated by the California Public Utilities Commission (CPUC) rather than local jurisdictions, the conversation around regulation was focused more around innovation and ways that LADOT could advocate for smart policies at the state level. In thinking about managing the number of vehicles on the road and the use of curb space, the companies generally preferred incentives (e.g. pricing) over rules and caps. They also both advocated that any sort of vehicle tax should apply to

private vehicles in addition to TNCs, in order to make the shift from private to shared mobility as attractive as possible.

Both companies were generally not in favor of data sharing, seeing their data and technology as central to their business models. The companies also expressed skepticism at DOT offering a single multi-modal technology platform.

There was widespread support for more partnerships between TNCs and governments, and the representatives had various examples and success stories to share. For example, Lyft's campaign with the City of Monrovia¹ to offer discounts on rides to and from public transit stops has resulted in an increase in ridership. Uber's new Movement data sharing platform² allows city planners to see real-time travel times and speeds on city roads. The representatives identified creating well-designed, designated pick up and drop off sites for shared vehicles as a key area of opportunity for collaboration and offered to help with design and strategy.

Los Angeles World Airports (LAWA)

The meeting with LAWA was a discussion about pressing issues and areas of opportunity between LADOT and LAWA. LAWA is undergoing a similar study with InterVISTAS Consulting regarding rules and regulations of for-hire vehicles at the airport, so they were looking to engage with LADOT as a stakeholder and partner.

An overall theme of the meeting was frustrated with Authorized Taxicab Supervision (ATS), which is the organization that manages taxi services at LAX. The issues and corresponding potential solutions fall into two areas:

1. **Managing the taxi queue and curbside.** The current rotation system and "pink calls" to handle excess demand encourages taxi drivers to linger in the LAX vicinity even on days when they are not scheduled to be able to provide service there.³ LAWA is looking at other methods such as Dulles Airport's check-in procedure where drivers receive a number and estimated time to return. Minneapolis–Saint Paul International Airport similarly moved to a virtual dispatch system and found a significant decrease in congestion. In addition, TNC congestion at the curbside is an ongoing issue and TNC pick-up and drop-off is currently being moved from the curb frontage to an auxiliary curbside, located in a parking lot adjacent to Terminal 1.
2. **Enforcement and accountability.** Aside from enforcing compliance with the rotation system, ATS is currently responsible for driver appeal hearings. On the other hand, LADOT is responsible for hearing appeals related to incidents elsewhere in the city. Having all taxi driver complaints and appeals go through LADOT would encourage a more standardized and thus fairer process. However, this added responsibility would have staffing implications for LADOT.

On the topic of innovation, there was much enthusiasm for using incentives to encourage more carpooling/ridesharing and decrease congestion. For example, LAWA is considering dedicating curbspace for HOVs, though enforcement and staffing to manage it is an open issue.

AccessLA Paratransit Services

The interview with Access included representatives from both their operational and financial units. The new competition that TNCs introduced into the for-hire vehicle market has been a boon to their

organization, as taxi drivers come to Access to find stable business. This allows the company to better meet the demand for both drivers and vehicles.

Regarding the future of the local market, the representatives expressed concern about regulatory uncertainty and their ability to plan for and meet increased demand due to demographic pressures. Particularly when it came to the idea of taxis in Los Angeles, they told us in plain terms “We want taxis to survive and be viable. We have an extremely symbiotic relationship.”

With regard to regulation, the Access representatives first advocated for more coordination among jurisdictions in LA County. Second, they believed a level playing field across taxis and TNCs makes the most sense and would be fairer and safer. If TNCs were required to comply with the same sorts of regulations, Access could even integrate their drivers and vehicles into day-to-day operations. Included in these concepts was the idea of a small (i.e. 25¢ per pickup) fee that all FHV operators would need to pay to the central regulator. This revenue could make up for lost parking revenue (as for hire use may displace private vehicle trips that require parking) and could also go towards improving ADA accommodation.

The representatives had several thoughts on innovation, which mostly involved partnering with LADOT. One concept involved dynamic curb space management, whereby LADOT could designate a blue curb during certain hours or move the locations to better accommodate disabled rider. Access is also currently working on an automated vehicle pilot project, though their expectations of automated vehicles significantly impacting operations in the coming years were dim.

Los Angeles City Council

In August 2018, after presenting the project objective and scope to the Taxi Commission, Jarvis Murray and Brian Bass, with support from Joe Iacobucci and the project team and Makenzi Rasey and Jennifer Cohen from LADOT, gave an abbreviated version of the presentation to members of the LA City Council. These meetings included:

- Councilmember Mike Bonin (CD 11)
- Councilmember Mitchell Englander (CD 12)
- Councilmember Paul Krekorian (CD 2)
- Transportation Deputy Eric Moody (CD 12)

The theme of the meetings was an overall positive response to LADOT being proactive about studying the for-hire vehicle landscape in Los Angeles and creating a more level playing field that results in more accessible and safer mobility. There was a sense that the government and DOT need to encourage taxis to better compete, ideally through incentivizing shared rides, greener fleets, and better customer service across all for-hire vehicle services.

Coordination was also a common topic. It was recommended that LADOT coordinate more closely with LAX, as airport trips comprise such a large portion of the for-hire vehicle business. It was also recommended that rules and regulations should be clear between different jurisdictions, and reciprocity should exist wherever possible.

Opportunities for innovation were also discussed. For example, there was interest in how to leverage this study to understand how people in the city use taxis, and how we can use the opportunity of new regulation and partnerships to create more affordable options for first and last mile service.

Lastly, the Council members raised concerns surrounding safety, emphasizing the importance of background checks, and also about congestion, giving rise to discussion about dynamic curbside management and smarter taxi stands.

3.B Customer Survey Summary

LADOT & Operator Data Collection

Next the team reviewed information that LADOT and its affiliate taxi operators already collect related to customer satisfaction, including taxi complaints submitted to LADOT and a customer satisfaction survey conducted by the Fairfax Research Group for Access paratransit services.

Within the taxi complaint data, rather than wait times or cancellations, “Driver overcharged me” was the most common single complaint. Other common complaints included drivers being discourteous or driving unsafely.

Access’ customer survey presents different feedback. The study, consisting of 1,319 telephone interviews, showed that Access customers are generally satisfied—nine in ten customers expressed satisfaction. Most survey respondents felt that drivers were courteous and vehicle appearance and cleanliness were satisfactory.

Consistent with the UCLA report, driver punctuality was the most frequently mentioned area for improvement. More frequent riders were more likely to report dissatisfaction. Further, about 20% of respondents had filed a complaint with Access but 55% of those customers were satisfied with Access’ response. The survey report thus suggests examining complaint response and resolution.

Finally, the survey provides information regarding paratransit customers’ use of technology. Approximately half of all Access customers have a smartphone, and only half of them have downloaded an app using the smartphone. This suggests that booking for rides via telephone remains a critical service for customers.

Curb Survey

To provide a more comprehensive analysis of customer satisfaction with taxis, the team partnered with the taxi app Curb to send an original survey to approximately 8,500 customers in Los Angeles. The survey includes questions about the customers’ use of taxis, satisfaction with taxis, demographic information, and familiarity with LADOT. In addition to supporting this project, it furthers LADOT’s Transportation Technology Strategy by building awareness of the strategic plan and framing this survey in terms of the broader Transportation Happiness initiative. The full text of the email used to distribute the survey is provided in appendix 7.B.

As of February 25th, 2019, there were nearly 100 responses. Survey responses may continue filing in beyond the scope of this project. The LADOT project team has shared ownership of the Google form. Janna Smith and Robin Aksu—who managed the DASH Pilot Transportation Happiness Survey that was used as a model—also have access.

Key takeaways from the survey responses include:

- Curb customers tend to use taxis rarely—less than 10% of respondents reported using a taxi more frequently than “a few times a year” or “rarely/never.”
- The most common reason for taxi use is returning to the passenger’s home from the airport via the taxi line
- 17% of respondents pay for their taxis using cash, reflecting another potential reason for taking a taxi over a ridehail service

- Satisfaction with taxis is extremely mixed using the 1:5 rating scale, with 1 equating to poor and 5 equating to excellent. The greatest consensus occurred in two questions:
 - Rating taxi affordability compared to other pickup services, two thirds of respondents answered “poor (1)” or “fair (2)” satisfaction.
 - Rating safety and comfort, 80% of respondents answered “good (3),” “very good (4),” or “excellent (5).”
- Within suggestions for improvement, the most common were (1) to improve the mobile experience to be similar to that of Uber or Lyft, and (2) to reduce fares.
- 73% of respondents are white/Caucasian and 76% have a combined household income over \$100,000. Hence, the survey sample is not representative of the LA population as a whole, demonstrating the need for a multi-angled approach to investigating customer satisfaction.
- Age and home zip code were more diverse and representative, as shown in Figures 9 and 10 below, though there were fewer responses from people under 30 range than would likely be the case with customers of Uber and Lyft.

Figure 9: Age Distribution within LADOT/Curb Customer Satisfaction Survey

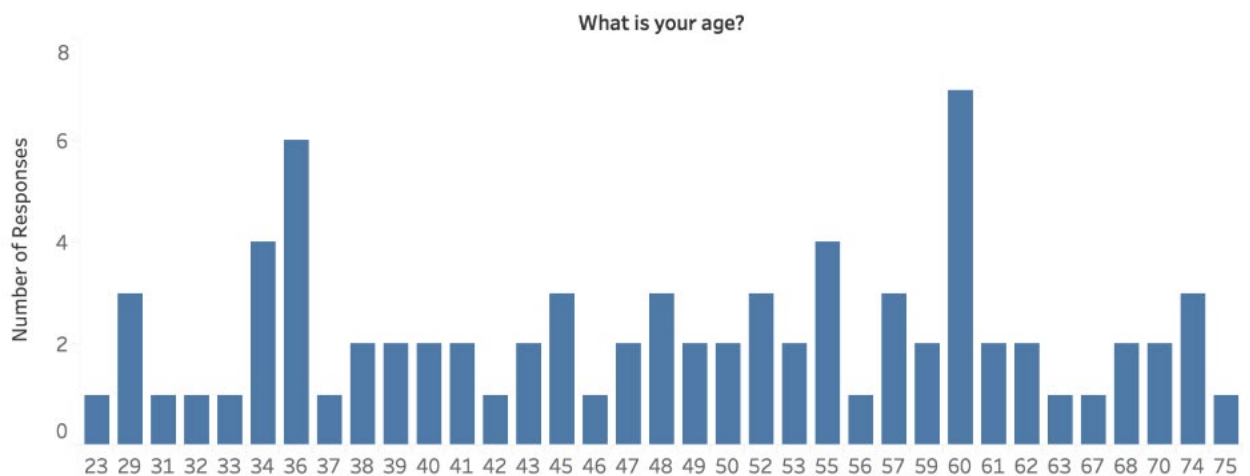
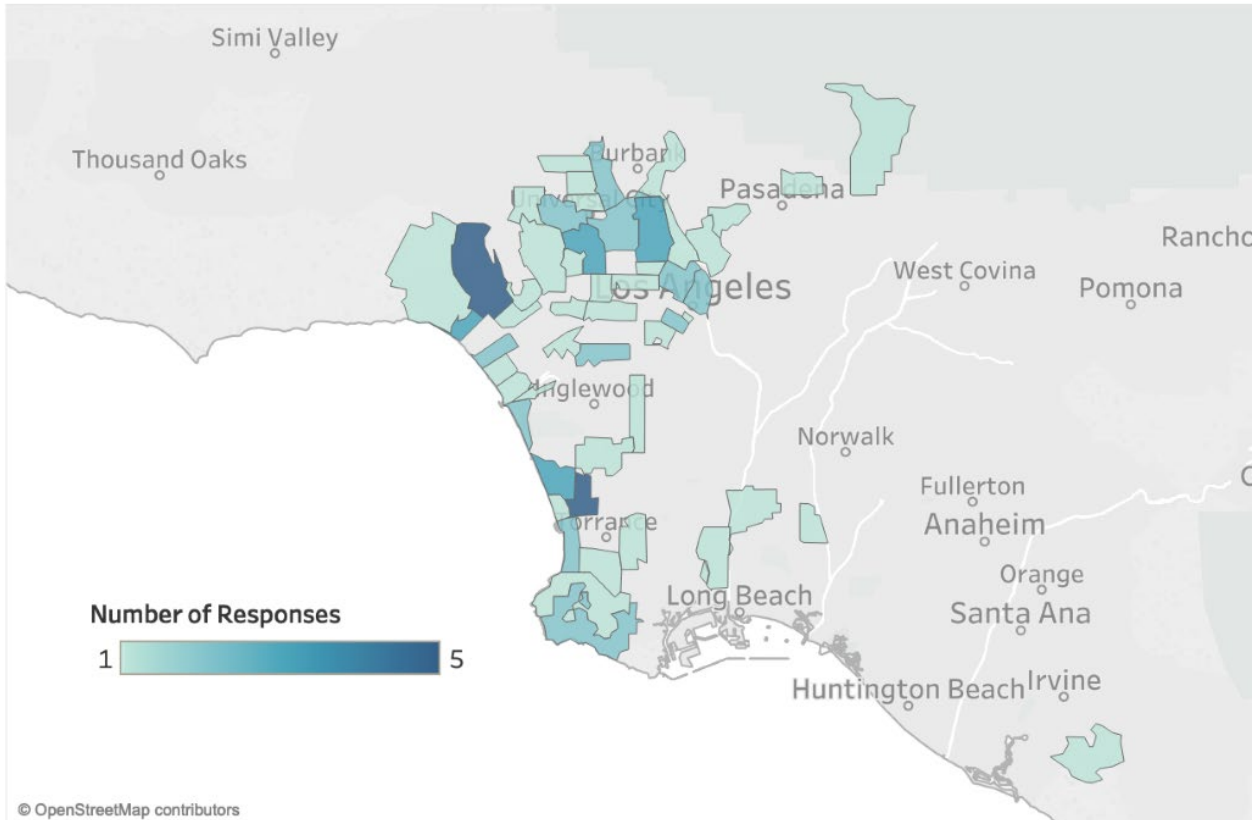


Figure 10: Geographic Distribution within LADOT/Curb Customer Satisfaction Survey

What is your home zip code?



3.C Cost of Doing Nothing

To kick off the LADOT Taxi and For-Hire Vehicle Study, the Sam Schwartz project team conducted a framing workshop to establish a client and stakeholder vision for the project and to collect input on key aspects of the project scope. One key topic in the framing workshop was gathering stakeholder input on what they saw as the cost of doing nothing. This is a useful exercise to document so that as the decision-making framework comes into focus as the study progresses, it can be revisited at key decision points. The following is a summary of stakeholder perception of the cost of continuing with the status quo in terms of taxi and for-hire vehicle regulation.

- 1. Broken/outdated regulatory system** – With TNCs dominating the for-hire vehicle market and diversifying their offerings continually, regulating taxis without addressing the growing share of TNCs on the road means that the current regulatory system is not addressing most of the for-hire services that are operating in the city.
- 2. Congestion Impacts** – A number of studies suggest that TNC use may contribute to increased VMT and congestion, however results likely vary based on contextual factors such as time-of-day, built environment, urban density, walkability, transit accessibility, etc. A system that does not provide a mechanism to address the impacts of TNCs on the transportation network may miss an opportunity to address a key contributor to congestion, particularly as public agencies prepare for an automated vehicle future.
- 3. Unhappy customers/unhappy drivers** – The current discrepancy between the regulations and incentives imposed on taxis compared to TNCs and other for-hire vehicle services is not maximizing innovation in the taxi industry, providing protections for TNC drivers, or providing maximum utility to for-hire vehicle customers.
- 4. Potential for driver mistreatment** – With the rise of the gig economy, protections may be needed to ensure that drivers can earn a living wage and have access to other benefits.
- 5. Poor user experience** – The taxi industry has not kept up with the user experience innovations happening with TNCs and other for-hire vehicle services. Relaxation of unnecessary taxicab regulations and LADOT leadership on user experience improvements may help to level the playing field between the user experience of different services. In addition, LADOT can provide incentives for all for-hire vehicles to achieve larger social goals in the city.
- 6. Lack of data driven results** – LADOT does not currently collect data on for-hire vehicle services besides taxis that operate in Los Angeles. Even collected taxi data is not granular, frequent or organized in such a way as to facilitate data-driven decision-making.

4. Proposed Regulatory Framework

4.A Functionality of Current and Potential Operating/Permitting Processes

Introduction

Historically, local governments have heavily regulated the taxicab industry in large urban areas in the U.S. and around the world. The taxi and for-hire vehicle industry saw little innovation or change in how it was regulated until the first TNC apps appeared in the early 2000s. Entrepreneurs introduced smartphone and mobile device applications that addressed market failures and shortcomings of the traditional taxi. By offering a flexible, technology-based transportation service, TNCs reduced the search costs of for-hire transportation. With demand-responsive services, people no longer had to stand on the street hoping to find an available cab or call a dispatcher and hope the estimated arrival time was reliable and reasonable. This simple change in service expectations caused the number of for-hire vehicle trips to skyrocket in cities around the world, while the number of taxi trips plummeted.

Regulators reacted to the arrival of on-demand app-based services by establishing distinct, relatively light regulations for TNCs and leaving in place the burdensome regulations governing traditional taxis. Like many cities nationally and globally, California has distinct sets of laws for TNCs and taxis. These services are substitutes, and the same vehicle could be picking up passengers through street hails, phone calls, at taxi stands, and via app. These modes of transportation are set apart only by statutory definitions and technological advances.

TNCs have changed the transportation landscape, making improvements for passengers, owners, and drivers. Cashless payment has simplified the payment process and benefited drivers who no longer have to worry about carrying large amounts of cash, which made these drivers targets for theft in the past. Riders also benefit from not having to worry about exchanging currency with a driver. Among other capabilities, like advance fare setting, a digital platform enables riders to rate their ride experience, which tends to encourage better behavior by the person being rated. However, TNCs have decimated the taxi industry, and even though TNCs dominate the industry, LADOT has no current regulatory control over TNC to further LADOT's policy goals pertaining to safety, equity, accessibility, and sustainability.

In California, taxi services are subject to local licensing and regulations, while TNCs and other microtransit services (with some exceptions) are regulated by the state. In the future, as automated vehicles and car subscriptions become commonplace, the transportation ecosystem will likely transform even further toward a mobility as a service model. As LADOT reshapes its regulatory framework for taxis and for-hire vehicles, it should ask whether each regulation, rule, or requirement is necessary to achieve some legitimate public interest.

Why Regulate?

Taxicab regulations typically address market entry, service provider quality (*e.g.*, licensing companies and drivers), rate and fare controls, vehicle quality and appearance, and levels of service/operations.⁴⁸¹ Regulations should generally address market failures, with rules and regulations that are no more

⁴⁸ Organisation for Economic Co-operation and Development (25 May 2018), "Taxi, ride-sourcing and ride-sharing services - Note by the United States," available at https://www.ftc.gov/system/files/attachments/us-submissions-oecd-other-international-competition-fora/taxi_united_states.pdf (last viewed Jan. 1, 2019).

burdensome than necessary for the safety of customers and drivers, consumer protection, and the collection of non-personal trip data information. Examples of market failures include:

- Oversupply of vehicles, leading to traffic congestion and price-undercutting (and lower wages for drivers)
- Underserved areas and populations not having sufficient taxi service
- Deceptive practices relating to fares (price gouging, meter zapping, and long-hauling)
- Insufficient wheelchair accessible vehicles
- Poor customer service

Market failures can either be addressed through incentives, or by prescribing requirements or standards. For example, if the market fails to provide sufficient levels of wheelchair accessible vehicles to ensure compliance with the Americans with Disabilities Act, a jurisdiction could mandate that all vehicles be accessible (regulation) or offer discounted licensing fees for accessible vehicles (incentive). In this sense, regulatory frameworks can be viewed as either heavy or light. Flexible regulatory frameworks allow and encourage new and innovative forms of competition to enter the marketplace. New business models for delivering services and competition among new and traditional service providers can benefit consumers.

Data is essential to maintaining lighter – and more precise and flexible – regulatory systems. If operators are willing and able to provide data relevant to determine whether they are achieving public policy outcomes, then they should be allowed to operate under a “data rich, regulation light” framework, as opposed to a “data poor, regulation heavy” system.⁴⁹²

Regulating Market Entry

There are four existing types of regulatory systems that control access to the taxicab and private transportation industry: medallion, franchise, certificate of public convenience and necessity (“certificate”), and open market. Regardless of the type of regulatory system, market participants must abide by the jurisdiction’s qualitative regulations, which could include fare controls, quality controls (vehicle safety, driver qualifications, and liability insurance), and levels of service. These regulatory systems are described below and shown in Table 3.

In a **medallion (or permit) system**, the jurisdiction limits access to the market by setting a numerical limit on the number of vehicles that may operate as taxis. The jurisdiction issues medallions to individuals (either companies or natural persons) that meet certain qualifications. The jurisdiction will also regulate the sale and transfer of medallions after issuance, ensuring any subsequent owners are qualified to own and operate a taxi. New York City, Boston, and Chicago are examples of cities that use medallion system to regulate taxis. Some considerations for a medallion system are that they do not encourage competition or innovation and they create a property interest for medallion holders—meaning the system may be difficult to dismantle.

⁴⁹ Regulation of For-Hire Passenger Transport: Portugal in International Comparison — OECD/ITF 2016, p. 14, available at <https://www.itf-oecd.org/sites/default/files/docs/regulation-for-hire-passenger-portugal.pdf> (last viewed Jan. 1, 2019).

In a **certificate system**, companies receive authority from the jurisdiction to operate a certain number of taxis. Companies may petition to increase the number of vehicles they may operate, with approvals based on meeting certain criteria, including whether there is a demonstrated need for additional taxis to provide service. Unlike a medallion system, operating authority is issued to taxi companies, not individuals. Certificates are non-transferrable; however, a company’s ownership may be transferred. Systems that employ company-level qualifications benefit from economies of scale (e.g., customer service, technology, innovation).

Similar to a certificate system, the franchise system is based on company-level qualifications. In a **franchise system**, jurisdictions grant franchises to operate taxi services in a specific geographic area for a set term under a competitive bidding process. When the franchise term expires, the franchise is re-bid and service continues. While franchises are particularly useful for ensuring adequate levels of service to underserved areas and populations, critics argue that the franchise system impedes competition and innovation and has the effect of favoring incumbents over new competitors.

In an **open market**, the jurisdiction places no limit on the number of taxis that may operate in the jurisdiction and, instead, leaves it to the market to determine how many taxicabs are required to meet service needs. Any operator who fulfills the conditions for a license – insurance, training, security checks, and vehicle inspection – may offer taxi services, and taxi entrepreneurs are free to enter and leave the market. There are no geographical restrictions on licensed operators, who are free to provide service anywhere in jurisdiction. An open market is not the same as deregulation. The lack of limits or quotas on the number of vehicles that may operate in the locality does not also mean a reduction of qualitative regulation, such as vehicle and driver standards.

Table 3: Comparison of Taxi Regulatory Systems

	Medallion	Franchise	Certificate	Open Market
Market Entry Qualifications	Individual	Company-level	Company-level	Individual or company-level
Vehicle Limits	Yes—Caps the number of licenses.	Yes—Can be used to set maximum and minimum vehicle levels.	Yes—Caps the number of vehicles that each company may operate but may increase if necessary.	No (market decides)
Transferable	If the permits are transferrable, then their value is in line with available supply for a given demand.	No—but companies can be bought or sold.	No—but companies can be bought or sold, creating a secondary market for operating authority.	No.
Accessibility (benefits & considerations)	May need incentives or regulations, such as issuing different classes of medallions, to	Number of accessible vehicles is set in the franchise agreement.	May need incentives or regulations to meet accessibility goals.	Market may not favor providing accessible vehicles. Incentives or permitting conditions may be

	meet accessibility goals.			necessary to meet accessibility goals.
Congestion and Emissions (benefits & considerations)	Tightly controls the number of vehicles, but not necessarily where they operate. Incentives or regulations would be necessary to control where or when vehicles operate.	Can control where and when companies operate to mitigate traffic (e.g., rush hour, central business district).	Jurisdiction controls the number of vehicles and may be able to control where and when they operate. May need incentives or regulations to meet congestion goals.	No control on the number of vehicles that may enter the market. Incentives or other regulations would be necessary to control where or when vehicles operate.
Controlling Service (benefits & considerations)	May need incentives or regulations to ensure adequate coverage to certain areas.	Can require service coverage in certain geographic areas. <i>Note: Zones may not comply with new Cal. law.</i>	May need incentives or regulations to ensure adequate coverage to certain areas.	May need incentives or regulations to ensure adequate coverage to certain areas.

Vehicle Caps

In the taxi industry, an oversupply of unskilled workers has led to market entry restrictions and caps on the number of vehicles that may provide.⁵⁰³ There are various methods to set the number of taxis that will be allowed to operate in a jurisdiction or regulate minimum wages that would have a similar effect. The simplest approach is to set a numerical limit on the number of taxicabs as determined through regulation or by law. Examples included New York, Chicago, Boston and other cities that set the number of taxi medallions the respective cities would issue back in the 1930s. Similar to a medallion (or permit) system, in a “certificate” system, taxi companies receive operating authority to provide taxi services in the jurisdiction, typically conditioned to a specific number of vehicles that are authorized to operate. If the company wants to add more vehicles, it would need to formally request permission to do so, with approval based on specific criteria.

Caps set in the 1930s made sense because their primary purpose was to curb the oversupply of taxicab vehicles and drivers’ entry into what was an all-cash business, and to limit the impact of traffic congestion, fare-cutting wars, and other unsafe (and sometimes illegal) activities. In today’s context—where taxis are being decimated by TNCs—the only practical justification is congestion reduction, since fare regulation and consumer safety protections are in place in most, if not all, jurisdictions.

A jurisdiction-wide cap is a blunt and low-cost regulatory tool to limit the number of taxis irrespective of time, place, or actual traffic flow. For example, a cap designed to curb traffic in the central business district (“CBD”) during rush hours or at the airports may result in an insufficient number of taxis being available in other, less congested (and underserved) areas.

⁵⁰ See OECD/ITF, “Regulation of For-Hire Passenger Transport: Portugal In International Comparison” (2016), available at <https://www.itf-oecd.org/sites/default/files/docs/regulation-for-hire-passenger-portugal.pdf> (last viewed Jan. 1, 2019).

There are several other salient arguments against caps on taxis and other for-hire vehicles:

- There are several other sources of congestion besides taxis, such as construction, freight/delivery, tourism, population growth, and, of course, the unchecked proliferation of TNCs;
- Taxis can actually lessen congestion if they substitute private car use;
- Taxis supplement and increase mass transit use if they are providing for first and last mile travel;
- Caps incentivize taxis to concentrate in the most congested areas, typically CBDs, since these are the easiest place to find passengers; and
- Caps create barriers to entry that may increase fares and reduce service quality and innovation.

According to studies from UC Davis, San Francisco Municipal Transportation Agency and others, In some instances, taxis and for-hire vehicles are a substitute for mass transit and, therefore, exacerbate congestion. In 2018, in an attempt to reduce traffic congestion, New York City enacted regulations “freezing” the issuance of licenses for all for-hire vehicles, including TNCs, except for wheelchair accessible FHVs. According to the INRIX 2017 Traffic Scorecard Report, Los Angeles ranks as the most congested driving city in the world.⁵¹⁴ Unlike NYC, Los Angeles does not currently have the authority to cap the number of TNC vehicles that roam its streets. While the city has the authority to limit the number of taxis, given the proliferation of TNCs, a cap would not help achieve a legitimate policy goal and could hinder innovation and competition in the marketplace.

The experiences of localities that have eliminated vehicle caps and allowed free entry show that the availability of taxis has improved. Waiting times have also been shortened and customer satisfaction improved.

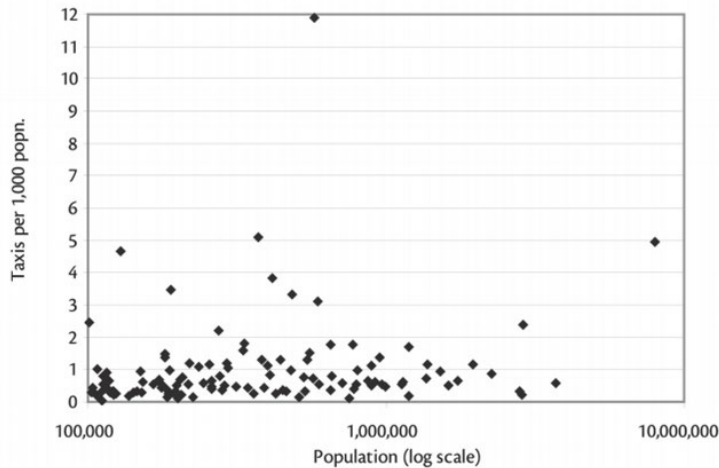
Ensuring Adequate Service Levels: The Optimal Number of Taxis

Taxi demand is often associated with the size of the jurisdiction’s population. The optimum number of taxi permits (per jurisdiction) is typically expressed as a ratio between the number of taxicabs and population (*i.e.*, “X” number of taxis to every 1,000 people). This methodology is somewhat blunt in that it does not take into account the different service levels of each taxi company, urban typology or other transportation features. Furthermore, as shown in Figure 11 below, there is a wide variation in the ratio of taxis per 1,000 population, even for cities with similar population size.⁵²

⁵¹ See INRIX Research, *INRIX 2017 Global Traffic Scorecard*, February 2018, available at <http://inrix.com/scorecard/>.

⁵² Bruce Schaller, “A Regression Model of the Number of Taxicabs in U.S. Cities,” *Journal of Public Transportation*, Vol. 8, No. 5, 2005, available at <https://www.nctr.usf.edu/jpt/pdf/JPT%208-5%20Schaller.pdf>.

Figure 11: Ratio of Taxis per 1,000 Population in 118 U.S. Cities



Source: Bruce Schaller, “A Regression Model of the Number of Taxicabs in U.S. Cities,” *Journal of Public Transportation*, Vol. 8, No. 5, 2005, available at <https://www.nctr.usf.edu/jpt/pdf/JPT%208-5%20Schaller.pdf>.

A more sophisticated approach would include additional factors—both exogenous and endogenous—that are associated with taxi demand. Exogenous factors include transit ridership, airport service, car ownership and tourism. Endogenous factors include ridership, fare revenue, utilization rate, and service quality. There are two steps necessary to complete such a calculation. The first is to identify the factors that have the highest correlation to taxi demand. The second is to use those variables in a regression model to approximate the optimum number of taxicabs. More data would be needed to complete this analysis for LADOT. A franchise system is the simplest way for a jurisdiction to ensure minimal levels of service consistently. It is possible that if Los Angeles dismantles its franchise system and its requirements that companies provide certain levels of service to their assigned zone, then taxi companies will not service passengers in certain areas of the city or provide accessible service. However, there are other ways for localities to ensure sufficient levels of service. For example, a flexible regulatory system that allows licensed taxis from other localities to pick-up passengers when demand is high is more efficient than a system that prohibits such pick-ups.

If a locality needs to increase the number of taxis/FHVs for a period of time or for special events, it could license those vehicles specifically. For example, Arlington, Texas allows pedicabs and Neighborhood Electric Vehicles (“NEVs”) to transport people during special events in the Entertainment District and at AT&T Stadium and Globe Life Park.⁵³⁵

⁵³ Arlington Transportation Ordinance, Art. X (amended by Ordinance No. 16-062) (December 13, 2016).

Recommendations

Los Angeles would benefit from a flexible framework that allows the LADOT to control market entry and vehicle supply through permitting companies, vehicles, and drivers, including certain basic requirements such as a minimum number of vehicles in a permitted fleet. All taxi companies need a basic permit if they primarily operate in Los Angeles. Any company that meets the requirements for licensure would be allowed to enter the market and offer taxi services anywhere in the city. The market would decide the number of vehicles that are necessary to provide service, while growth control mechanisms in the regulations could allow LADOT to impose caps if it determines that it is necessary to do so through inclusion of such a clause in the issued permits.

If a licensed taxi company wants to access the airports, transit hubs, taxi stands at high volume locations (i.e., stadiums, arenas), or designated bus or HOV lanes, then they would need a special permit from LADOT. Anyone could apply for a special access permit; however, the requirements for these permits would be higher than the basic permit and designed to achieve the city's policy goals. For example, as a condition of getting a permit to access the airport or taxi stands, taxi companies could be required to demonstrate (via data) compliance with designated pick-up and drop-off areas in congested zones, among other criteria. Another example could include requiring the taxi company to provide microtransit/HOV service (shared rides) to use designated bus lanes while transporting passengers.

4.B For-Hire Vehicle Innovations

Over the past five years, there has been a rise in the application of e-Hail services in taxi fleets, particularly in major metropolitan areas using predominantly third-party dispatch apps. E-hail apps have the potential to enhance customer service through simplified dispatching and payment and reduce meter fraud by disclosing the cost of a ride before beginning a journey. In Los Angeles, the Board of Taxicab Commissioners approved a mandate that required the city's taxis to use e-Hail mobile apps by August 20, 2015 or pay a \$200 daily fine.

In addition to e-Hail apps, third-party applications are enabling taxi sharing that increase cab occupancy (and fares) while reducing environmental impacts and wait times for customers. For example, Bandwagon is a service that is available at select airports and events that enables passengers headed in the same direction to be paired and advanced to the front of a taxi line. To use Bandwagon, users text their destination to the service and when they have found another passenger travelling along a similar route, the service sends both parties a text message with instructions to head to the front of the line. The service also allows passengers to split taxi fares. Services such as bandwagon that increase taxi occupancy may be key to providing taxis free or reduced cost access to high-occupancy vehicle and high-occupancy toll lanes (HOV/HOT) in the Los Angeles region.

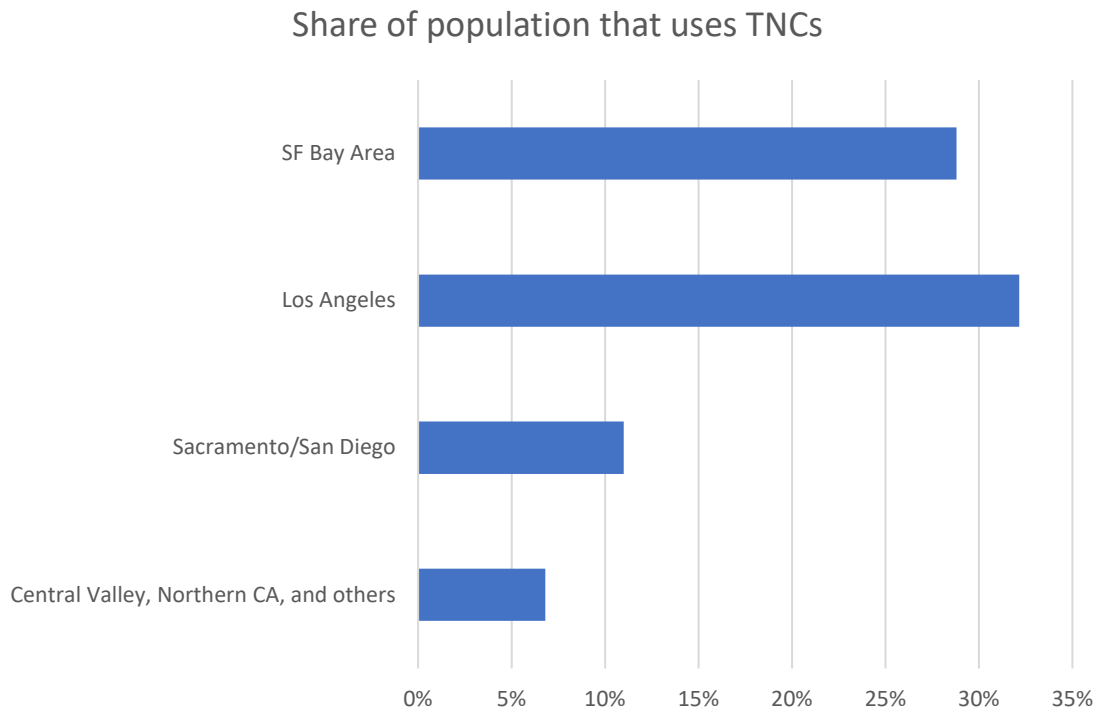
In addition to technologies employing e-hail services, another way that Los Angeles' taxis can innovate is enabling taxis to also facilitate last-mile delivery. E-commerce has the potential to create additional revenue for the taxi industry. In 2021, eCommerce sales worldwide are predicted to grow to \$4.48 trillion. This growth creates new opportunities for taxi companies to take on last-mile deliveries during off-peak business hours. eCommerce purchases often aren't bulky items, so while traditional delivery companies still use vans for transporting goods, most of these purchases could easily fit into a regular passenger car and provide supplemental income for taxi drivers. In 2014, Amazon piloted last-mile delivery using taxis via the Flywheel app in San Francisco. Amazon paid approximately \$5 per package delivered providing supplemental income to drivers when passenger fares were unavailable. Another way that taxis can innovate is revenue generation through in-vehicle advertising. For example, the Wynn Hotel has placed tablet advertising in over 1,000 Las Vegas taxi cabs. These innovations can help provide the taxi market increasing revenue to support financial sustainability.

TNC Growth

Due to their popularity and overwhelming presence, the primary focus for this regulatory framework should be the social, environmental, and economic impacts of TNCs and how these services can help LADOT reach mobility goals. Nationally, TNCs carried more than 4 billion passengers in 2018, up from an estimated 1.9 billion passengers in 2016. The Los Angeles region uses TNCs at a higher rate than any other part of California. A 2018 study showed that 32% of residents of Los Angeles County use TNCs, which is higher than all other regions included in the study.⁵⁴ This is shown in Figure 12. The number of TNC trips provided in Los Angeles is difficult to estimate as TNC operators do not currently share this data, but their popularity and growth is apparent.

⁵⁴ Circella et al. 2018

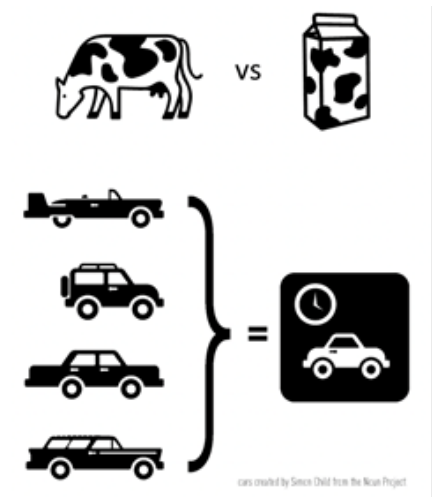
Figure 12: Share of population that uses TNCs (Uber/Lyft)



Furthermore, the growth of TNCs is prominent among visitors. From 2014 to 2018, business travelers experienced a 19-percentage point increase in the share of ground transportation spending dedicated to TNCs.

The mobility of both people and goods is being disrupted and is experiencing a rapid evolution. A fundamental shift in mobility services has occurred with the rise of on-demand transportation, shared mobility, and the commodification of transportation services. The growth of innovative shared mobility options has increased the number of available service options within the transportation marketplace. Mobility is increasingly treated as a commodity, bought by the trip without the need to own the means of production. Mobility can be consumed as a commodity, purchased by trip rather than the car itself, just as milk can be bought by the carton and consumed without owning a cow, as Figure 13 below shows.

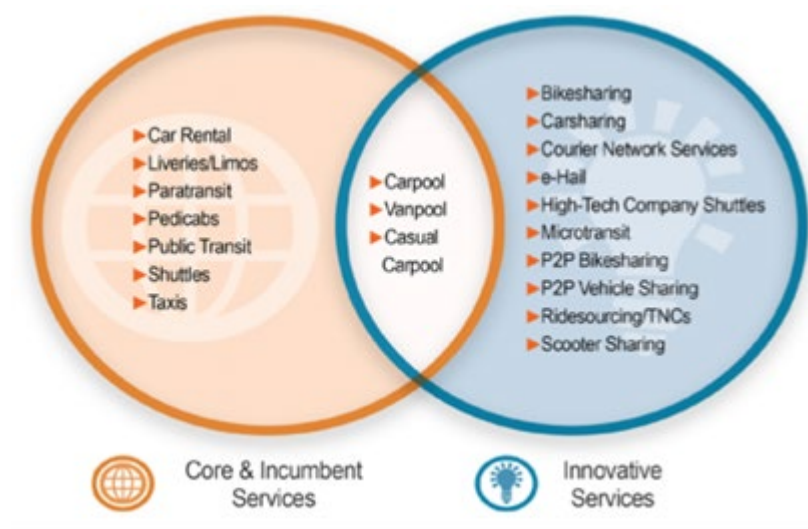
Figure 13: Mobility as a Commodity



The concept of shared mobility is simple – users access a mode of transportation such as a vehicle, bicycle, scooter, or other mode for short-term access on an as-needed basis. Increasingly, consumers are assigning economic values to modes and engaging in multimodal decision-making processes based on a variety of factors including: cost, travel time, wait time, number of connections, convenience, and other attributes. Rather than making decisions between modes, mobility consumers can make decisions among modes, in essence ‘modal chaining’ to optimize route, travel time, and cost. Additionally, digital information and fare integration coupled with the commodification of transportation services is contributing to new on-demand access models such as: mobility on demand (MOD) and mobility as a service (MaaS). MOD is an innovative concept based on the principle that transportation is a commodity where modes have economic values that are distinguishable in terms of cost, journey time, wait time, number of connections, convenience, and other attributes. MOD enables consumers to access mobility, goods, and services on demand by dispatching or using shared mobility, delivery services, and public transportation solutions through an integrated and connected multi-modal network.

With the growing number of mobility options (see Figure 14), there is a growing need for a common user interface and booking system that encompasses the various transportation choices. The idea of integrating all public and private transit options into one common user interface is called Mobility as a Service (MaaS). By bundling many options together, potentially sold as a subscription package, the user experience can be dramatically simplified.

Figure 14: The Shared Mobility Ecosystem



The Future of Taxis and Public Transportation in an Automated Future

Technological, mobility, and societal trends are changing how Angelenos are travelling. While Los Angeles has been and is still heavily dependent on the personal automobile for mobility, changes in technology, demographics, economics, and attitudes are transforming how mobility is accomplished.⁵⁵ ⁵⁶ Increasing congestion, fiscal austerity, and the need to maximize existing infrastructure use—coupled with the growth in telecommuting, goods delivery, and digital consumption—are changing mobility needs, consumption, and traveler behavior (Matos and Galinsky 2014; Kolko 2017). Heightened environmental awareness, the growth of megaregions, demographic changes (e.g., rising life expectancies and an aging population), and a reduced reliance on brick-and-mortar establishments are driving fundamental transportation and modal changes across California and the United States.⁵⁷

Increasingly, consumers are accessing mobility, goods, and services on-demand by dispatching, or using shared mobility, automated vehicles, courier services, automated (or self-piloted) aerial vehicles and drones, and public transportation solutions. The commodification of transportation and the increasing availability of on-demand mobility is transforming how travelers view automobility and the way Americans travel in a variety of ways.⁵⁸ The convergence of a number of trends will lead to fundamental changes in transportation in the coming years:

1. The Growth of Privately-Owned and For-Hire Automated Vehicles
2. Impacts to Public Transit & The Built Environment
3. Vehicle Technologies
4. Potential Growth of Urban Air Mobility

Each of these trends are discussed in greater detail below:

⁵⁵ Shaheen, Cohen, and Zohdy 2016

⁵⁶ Shaheen et al. 2016

⁵⁷ Regan and Picker 2017; Koettl 2016

⁵⁸ Shaheen and Cohen, 2018

The Growth of Privately-Owned and For-Hire Automated Vehicles

Technology is changing the way people move and is reshaping cities and society. The integration of transportation modes, real-time information, and instant communication and dispatch – all possible with the click of a mouse or a smartphone app – is redefining ‘auto mobility.’ The convergence of MOD, vehicle automation, and electric drive technology have the potential to make cars more cost effective, efficient, and convenient – especially when shared.

For some households, automated vehicles (AVs) will allow them to move closer to urban centers and shed private vehicles in favor of shared automated vehicles (SAVs). For other households, AVs will allow them to move farther from urban centers as the time cost of commuting becomes less cumbersome when the traveler can do other things. While many studies forecast falling costs associated with automation, the potential impacts on ownership, use, and the potential for induced demand are unknown. Although the potential impacts of AVs and SAVs, including future ownership and mode choice patterns, are unknown, it is clear that vehicles of all sizes and uses will be impacted by automation. As vehicle automation becomes mainstream, policy makers will need to rethink traditional notions of access, mobility, and auto mobility.⁵⁹

In the future, a number of services may converge resulting in primary SAV business models:

- For-Hire/Business-to-Consumer: In this model, customers dispatch an automated taxi from a company that maintains a fleet of automated taxis.
- Peer-to-Peer: In this model, a company provides the resources to facilitate private AV owners placing their vehicles into a shared taxi network. In this case, the company may provide insurance and retains a portion of the taxi fare.

In an automated vehicle future, because a lot of business models will likely converge (e.g., carsharing, TNCs, taxis, etc.), the most important distinguishing characteristics from a regulatory perspective may be determining who owns the AV and who owns the network or platform where the vehicles are shared. Also, in an automated vehicle future, pricing may be a cornerstone policy of the regulatory agency to ensure that vehicles are concurrently shared (e.g., pooled) and “right-sized” at appropriate times of day (e.g., smaller and lower-occupancy AVs are used to provide late night transportation and during the off-peak periods, with larger and higher occupancy vehicles used during peak periods).

Vehicle Technologies

The evolution of technology within the transportation sector has led to major opportunities in how future systems may be planned and designed. Connected vehicles are equipped with technology to communicate with the driver, other cars, and roadside infrastructure. With additional information, drivers or automated systems can make better informed decisions by understanding how to avoid potentially dangerous situations. The adoption of electric vehicles will mean additional infrastructure to support them (e.g., charging stations). In an automated vehicle future, Los Angeles will need a network of streets optimized for automated vehicles. The confluence of these three technologies will also enable LADOT to access speed, location, and trajectory data, thereby enabling better management of traffic flow and the ability to address issues in real time.

⁵⁹Cohen & Shaheen, 2016

Public Transit & The Built Environment

In the future, automation could be the most transformative trend to impact regions and public transportation since the automobile. Automation will likely result in fundamental changes to public transportation by altering the built environment, costs, commute patterns, and modal choice. Reduced vehicle ownership due to SAVs could result in changes in parking needs, particularly in urban centers. The repurposing of urban parking has the potential to create new opportunities for infill development and increased densities. While SAVs may compete with public transit ridership, infill development could also create higher densities to support additional public transit ridership and allow for the conversion of bus transit to rail transit in urban cores. However, the growth of telecommuting and AVs also make longer commutes more practical, which could shift consumer preferences in favor of suburban and exurban living. If workers do not have to commute every day, and if those commutes are less expensive and more productive, today's time cost of commuting (and congestion) may be notably reduced. As such, concerns that the introduction of AVs could reduce demand for public transit and may encourage increased vehicle use are real. But just as AVs have the potential to reduce driving costs, automated transit vehicles have the opportunity to reduce operating costs and the potential to pass these savings on to riders in the form of lower fares. Reduced operational costs and lower fares could make public transit more competitive than other modes and result in increased ridership.⁶⁰

Potential Growth of Urban Air Mobility

Urban Air Mobility (UAM) is an emerging concept of air transportation where air vehicles ranging from small package delivery drones to passenger-carrying air taxis operate over populated areas, from small towns to the largest cities. This could revolutionize the way people move within and around cities by shortening commute times, bypassing ground congestion, and enabling point-to-point flights across cities.

In recent years, several companies have designed and tested enabling elements of this concept, including prototypes of Vertical Take-Off Landing (VTOL) capable vehicles, understanding of operational concepts, and development of potential business models. In recent years, technological advancements have enabled numerous companies to build and deliver a variety of prototypes and market-ready products for UAM including drones, piloted aerial vehicles, and automated aerial vehicles. A closer look at these passenger travel initiatives reveals marked differences in design, technology, range, and compatibility with existing infrastructure. For example, in the passenger UAM marketplace, some original equipment manufacturers (OEMs) have produced electric fixed-wing and quadcopter offerings often with more limited range, while others have produced longer-distance, gas-powered prototypes. Some employ vertical take-off and landing (VTOL) capability (e.g., eHang), while others may require a landing strip (e.g., Terrafugia TF-X). Some are intended for aerial flight only, while others are designed with dual capability to both fly and drive on existing streets (e.g., AeroMobil).

Dubai's Roads and Transport Authority (RTA) has recently begun testing UAM usage for passenger transport, providing a benchmark for subsequent UAM applications. UberElevate has announced that it will launch air taxi services in Los Angeles in the early 2020s. In 2019, Uber launched Uber Copter, providing helicopter rides from lower Manhattan to JFK airport. Experience suggests that a variety of additional factors (i.e., social, regulatory, and economic) can create market enablers and barriers to transformative technology—particularly in the transportation sector. While there are a lot of unknowns,

⁶⁰Cohen & Shaheen, 2016



air taxi service could expand LADOT's regulatory role beyond traditional taxis to include additional areas, such as the development and management of skyports/vertiports.

4.C Incentive-based framework

LADOT's current regulation applied to for-hire vehicles is only applicable to taxicabs and contractually-based microtransit services. However, as a number of innovative mobility services have been introduced and widely adopted, in recent years, taxicabs are becoming an increasingly smaller percentage of the for-hire vehicles on the road. The transportation marketplace has exploded with a variety of shared services that facilitate personal mobility in addition to courier network services with more to come on the horizon as technology continues to advance. However, as most of these modes are owned and operated by private companies, LADOT needs a way to proactively manage the operations of these companies in the interest of the public good, whether that is encouraging the sharing of data to enhance transparency or the use of shared rides to decrease congestion.

Within this quickly evolving ecosystem, the Sam Schwartz project team has developed a comprehensive framework that can be applied to all emerging and evolving services as they are introduced to reach LADOT's goals and desired outcomes. The following regulatory framework breaks down for-hire vehicles into eight categories.

1. For-hire Services (Taxi/TNCs)
2. Automated For-Hire Services (Taxi/TNCs)
3. HOV/Microtransit
4. Automated HOV/Microtransit
5. Goods Delivery
6. Automated Goods Delivery
7. Urban Air Mobility (UAM)
8. Micromobility

Each category in this framework contains a unique set of performance incentives. These incentives are based on LADOT's values surrounding mobility and will require mobility providers to meet certain performance metrics in order to access certain privileges in that category. This framework is meant to provide flexibility and will allow LADOT to encourage private mobility companies to act in the interest of the public while allowing industry to innovate.

Within each regulatory category, there is a menu of incentives to reward participants for reaching or exceeding certain performance metrics, as determined by LADOT. With this, LADOT can use choice architecture to nudge private mobility companies towards better decisions. Decisions are not made within a vacuum and choice architecture refers to the design in which choices can be presented to companies and the impact of that on decision making.

As LADOT is hoping to oversee rather than impose control and limit what private mobility companies can or cannot do, this framework would change the decision-making context, thereby encouraging them toward behavior that would lead to a favored outcome. Rather than changing the way private mobility companies think, it would be changing the environment in which they make decisions. By making costs and benefits clear, LADOT may indirectly influence the decision making of private mobility companies.

The new framework provides the opportunity for LADOT to advance sophisticated incentives by creating a system where specific performance metrics are connected to specific incentives.

Furthermore, performance metrics can be tiered, allowing companies to receive a higher rebate for reaching a higher percentage of shared rides. Minimum requirements will also be created for taxis and in anticipation of future modes to create beneficial incentives from the beginning. For example, in order to obtain an automated vehicle permit, companies will need to (at minimum) participate in data-sharing agreements in addition to reaching or exceeding other performance metrics.

Some incentives may be financial, such as the fee currently levied to support wheelchair-accessible services. However, incentives need not be financial – they can include city assets such as: access to the curb, priority ROW, mobility hubs with vehicle charging, access to LAX, and access to urban air mobility or AV pilot permits. LAWA has also shown willingness to use access to LAX as an incentive. Incentives can be calibrated over time to authorize a sufficient but not overwhelming number of vehicles to operate at the airport.

Defining Objectives

The foundation of the proposed framework are objectives that LADOT strives to achieve for the benefit of the public, which can be translated into incentives to encourage performance by mobility companies in pursuit of those objectives.

Recommended objectives based on guiding principles of the study that can be addressed through the incentive framework are as follows. Other policy recommendations that support the guiding principles but that are not part of the incentive framework are addressed in later sections of this report.

1. Improving transportation equity and accessibility:

- Ensuring spatial, temporal, economic, physiological, and social equity.
- Coverage of underserved areas (e.g., low-income, minority, and other communities).
- Accessibility standards for people with disabilities.
- Access for under- and unbanked and digitally impoverished households.

2. Traffic congestion reduction and mitigation; emissions reductions:

- Percentage of rides using pooled service model.
- Average vehicle occupancy.
- Percentage of time that vehicle is used by a customer.
- Compliance with driver matching systems in high-demand areas (LAX).
- Percentage of trips that pass through identified congestion zones.
- Percentage of vehicles using electric power.
- Emissions from vehicles in the company's service (per miles operated).

3. Expanding economic opportunities and fostering innovation:

- Compliance with data sharing in standard MDS format.

4. Openness/flexibility to new technology:

- A transitional taxi automation schedule, driven by pilots, incentives and/or fleet mandates

5. Leveling the playing field among the various for-hire vehicle sectors:

- Participation in universal booking application.

Minimum Requirement Recommendations

As LADOT has direct permitting authority over taxicabs operating in its jurisdiction, it is able to create minimum permitting standards for taxis. As permitting for TNCs happens at the state level through the California Public Utilities Commission, LADOT does not have regulatory authority to set minimum standards for TNCs. As future modes, including automated modes, are integrated into the regulatory framework it can be determined whether LADOT has regulatory authority to set relevant minimum standards. LADOT intends to require a minimum number of vehicles per permitted fleet/company, in order to prevent LADOT from effectively becoming a public TNC that licenses individual drivers). In addition, taxicabs will be required to participate in the Mobility Data Specification as soon as logistically feasible. Other minimum standards pertaining to accessibility, vehicles, insurance, training, etc. are articulated in later sections of this report.

Incentive Structure Recommendations

The foundation of the proposed policy framework is that measurable metrics will be used to judge the performance of taxi and other for-hire transportation services. Each metric is tied to one of LADOT's goals in order to ensure that we are encouraging actionable behaviors that will lead to our preferred outcome. Metrics are also tied to specific incentives to reward participants for reaching or exceeding each performance metric. the following incentive structure is proposed for taxicabs, TNCs and microtransit and is in addition to minimum permitting requirements.

Goal 1: Improve Transportation Equity and Accessibility

Performance Indicators	Incentive
Diverse payment options – cash and card options available	<i>Minimum required to access incentives in this category</i>
Coverage of underserved areas (e.g., low-income, minority, and other communities): average wait times in low-income and minority communities must relatively be within a certain percentage of all other areas served within jurisdictions where vehicles are permitted to operate.	For taxis, participation in third party universal booking system, if spatial equity performance is documented through provision of MDS data. For TNCs and microtransit, partial refund on trip accessibility fee.
Participation in a universal booking system	Access to airport property in coordination with Los Angeles World Airports (LAWA/LAX).
Accessible vehicles: successful location and matching of an accessible vehicle within a certain percentage wait time compared to the service’s overall wait time.	Collected Accessibility trip fees may be used for maintenance or purchase of Wheelchair Accessible Vehicles (WAVs). The LADOT will also explore a reduction or elimination of WAV permit fees for top performers.

Goal 2: Decrease or mitigate congestion; emissions reductions.

Performance Indicators	Incentive
Participation in pooled ride services (either their own, as a microtransit service, or through a service such as Bandwagon)	<i>Minimum required to access incentives in this category</i>
Meet minimum average vehicle occupancy goals or percentage of pooled rides	Access to network of HOV lanes, including on surface streets
Documented use of designated pick-up and drop-off areas only in identified congestion zones (through provision of MDS data)	Access to off-street driver rest areas with EV charging station, bathrooms and vending.

Goal 3: Expand economic opportunities and fostering innovation.

Performance Indicators	Incentive
Compliance with data sharing in standard MDS format	Minimum standard for taxis; Permit to operate automated vehicle and urban air mobility pilot programs for TNCs and taxis

Goal 4: Enhance openness and flexibility to new technology.

Performance Indicators	Incentive
Participation in universal booking application.	Mandated schedule with pilot program in future minimum requirements for taxis and microtransit permitting. No incentive needed for TNCs.

Goal 5: Level the playing field among the various for-hire vehicle sectors.

Performance Indicators	Incentive
Compliance with transitional taxi automation schedule	See incentives for improving transportation equity and accessibility.

Implementation

Table 4 outlines proposed policies for LADOT to adopt pertaining to the eight identified regulatory categories in the short-, medium- and long-term in order to facilitate a system of incentivization. From there, LADOT can establish targets for each service category in addition to a list of incentives that companies may have access to as a reward for reaching or exceeding predetermined targets. Targets may be tiered and private mobility companies could be rewarded with more permits, lower fees (e.g. curb), and other perks (e.g., HOV lane access).

Table 4: Suggested Policies by Regulatory Category and Timeframe

	For-Hire Taxi/TNC	Automated For-Hire Taxi/TNC	HOV/ Microtransit	Automated HOV/ Microtransit	Goods Delivery	Automated Goods Delivery	Urban Air Mobility	Micromobility
Short (12 - 24 months)	Integrate taxis and TNCs into the same local franchise system. Geographic reciprocity.	Develop a workforce development plan to prepare labor for a transition to automated transportation systems.	Identifying gaps and opportunities. Determine staffing needs. Geographic reciprocity.	Develop a workforce development plan to prepare labor for a transition to automated transportation systems.	Develop a strategy and vision for goods delivery (e.g. drones, curb zones, delivery lockers, hubs). Designated curb zones for delivery activities in busy areas.	Develop a workforce development plan to prepare labor for a transition to automated transportation systems. Designated curb zones for delivery activities in busy areas.	Amend fire and building codes to enable the use of existing helipads for UAM and revise codes to encourage the addition of helipads in new construction to prepare the city for a UAM future.	Curb space management and user guidelines and enforcement.
Medium (2 – 5 years)	Mobility hubs, charging, driver facilities. HOV lane planning for shared for-hire services. Plan for automation (vehicles, labor) Dynamic curbspace management. Universal booking system (like GoLA). Designate drop-off and pick-up locations in high capacity areas.	Authorization of pilot projects. Mobility hubs, charging. Dynamic curbspace management. Universal booking system (like GoLA). Designate drop-off and pick-up locations in high capacity areas.	Mobility hubs and pilots. HOV lane planning. Universal booking system (like GoLA). Designate drop-off and pick-up in high capacity areas.	Authorization of pilot projects. Mobility hubs, charging. HOV lane planning. Universal booking system (like GoLA). Designate drop-off and pick-up in high capacity areas.		Authorization of pilot projects.	Develop partnerships to enable early testing (e.g., FAA, NASA, etc.) Develop guidelines and zoning for UAM vertiport/mobility hubs. Universal booking system (like GoLA).	Designating ROW and modal conflict management. Universal booking system (like GoLA).
Long (5 – 10+ years)	Real-time, dynamic curbspace management.	Real-time, dynamic curbspace management.	Build out HOV network. Data sharing using with MDS	Build out HOV network.	Data sharing using with MDS as a requirement.	Data sharing using with MDS as a requirement.	Enter into UAM franchise with providers.	Data sharing using with MDS as a requirement.



	Data sharing using with MDS as a requirement.	Data sharing using with MDS as a requirement.	as a requirement.	Data sharing using with MDS as a requirement.			Data sharing using with MDS as a requirement.	
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In order to achieve such a regulatory system, it is recommended that LADOT undertake the following tasks in addition to the policies in the above matrix.

Short-term (1-2 years)

- Multi-jurisdictional coordination, centralized regulation (AB 1069 helps)
- At LAX, execute early termination of Airport Terminal Services (ATS) contract to align with the expiration of the franchise system in 2019. Develop contract for new management as needed.
- Develop Mobility Data Standards (MDS).
- Begin requirement that taxicabs move toward upfront fare calculation as prerequisite for a universal booking system.
- Develop a Conceptual Operations (ConOps) plan for key areas.

Medium-term (2-5 years)

- Implement system of airport permits with appropriate incentives.
- Develop a fee and rebate system for for-hire vehicle trips.
- Strategically place taxi/TNC mobility hubs with facilities, vehicle charging and amenities in City-owned garages.
- Develop universal booking system with booking, routing, and payment.
- Continue coordination with LAWA and ensure incentives, technology requirements, and other objectives are aligned with LAX goals.
- Develop a Conceptual Operations (ConOps) plan for all of Los Angeles.

Long-term (5-10+ years)

- Consider congestion pricing and fees on private, single occupant, and zero occupant vehicles.
- Use fees to support infrastructure for shared, electric, automated future.
- Use fees to support availability of accessible vehicles
- Dynamic, digital, curbside management and pricing.

Stakeholder Outreach

The framework will need to be tested and evaluated in order to better understand how private mobility companies will respond, what types of incentives would motivate them most, and how incentives may need to be adjusted to continue to nudge companies toward desired behavior. This framework is designed to be able to evolve over time, as conditions warrant.

4.D Vision Zero

Vision Zero Considerations for Taxi and For-Hire Vehicle Regulation

Los Angeles' Vision Zero plan boldly established the goal to eliminate traffic deaths by 2025. The plan also identified many concrete steps to make this a reality. However, the original plan did not specifically address taxis and for-hire vehicles. Taxis and for-hire vehicles play an important role in transportation safety. Because these vehicles are driven at a much greater rate than the average personal vehicle, they are also involved in more crashes than the average personal vehicle. Policies toward taxis and for-hire vehicles should be considered in this light to understand potential direct and indirect safety implications.

When selecting an overall regulatory approach, Vision Zero impacts must be considered. The main traffic safety implications of different regulatory approaches would pertain to the regulation of driver qualification and vehicle condition. Drug and alcohol testing, background checks, and licensure play important roles in ensuring driver safety. Vehicle inspection standards are also important in ensuring safety. These functions can be most effectively facilitated by LADOT, not for-hire vehicle companies, to avoid potential conflicts of interest and to reinforce the safety focus of Vision Zero.

When consolidating the regulation of all taxicabs in Los Angeles County, Vision Zero impacts also must be considered. Whatever entity is given responsibility for licensing and regulating taxicabs within Los Angeles will need to prioritize vehicle and driver safety, including drug and alcohol testing, background checks, licensure, and vehicle inspections.

Applying an Incentives-based Framework to Support Vision Zero

An incentives-based regulatory framework could be a powerful tool to support Vision Zero goals. As described in the Proposed Regulatory Framework, this would offer companies different tiers of benefits to reward desirable outcomes on key performance metrics. Safety-related performance metrics could include the rate of crashes, injuries and fatalities; the rate of traffic tickets received; or the rate of safety complaints received from members of the public. Companies could be awarded or docked points based on safety performance, and then would use the points to access various privileges or congestion pricing discounts.

Some baseline safety-related requirements should still be mandated as minimum requirements for any company providing taxi services. Where LADOT has authority, safety-focused minimum requirements can be applied through permitting approvals and/or levying fees to penalize violations. This framework is appropriate for requirements such as driver background checks, drug and alcohol testing, safe driving records, and vehicle inspections. Currently LADOT's authority to set these requirements only extends to taxis and not TNCs; this makes the incentives-based approach to TNCs especially important.

4.E Congestion Analysis

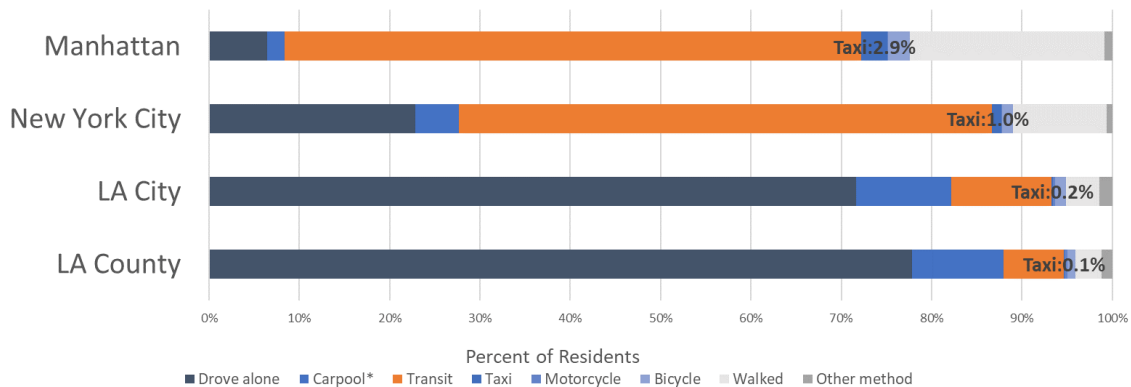
To plan for future TNC and taxi use, it's important to understand today's conditions as a baseline. The number of vehicles using LADOT's roadways is directly related to their performance for all users. While roadways should continue to be used to provide the maximum public benefit, too much use can result in deteriorating public benefit. Therefore, an analysis of the ideal number of vehicles in motion on city streets to maximize public utility can then be used to craft relevant transportation policy and incentives accordingly. This analysis is broken into two parts:

1. The relationship between the number of vehicles currently in motion on key central LA corridors, and the speed of those segments, and ultimately the total number of Vehicle Miles Traveled.
2. The ratio of TNC trips to non-TNC trips. This provides insight into the current relative proliferation of the mode and, therefore, the order of magnitude that TNC incentives could have on general traffic congestion.

Commute Mode Comparison

Los Angeles' mode share is a significant factor in understanding today's traffic conditions. Los Angeles has a higher personal vehicle mode share compared to other peer cities such as New York City (Figure 15).

Figure 15: Mode Share Comparison between Los Angeles and New York City



Vehicles in Motion (VIM) Analysis

Fourteen arterials in central LA were studied using data from the Arterial Performance Management Tool developed by LA Metro. The data set contained an hourly distribution of average speed, traffic volume, and Vehicle Miles Traveled (VMT) for each arterial. Implicit in this analysis is the assumption that arterial data can be used as a proxy for measuring the greater system of roadways in the area. Most trips of a significant length would involve some travel on arterials and, ideally, arterials would not be so congested as to cause spillover traffic onto local streets. The study area includes Dodger Stadium, LA Live, Staples Center, and the Convention Center, as shown in Figure 15.

The number of vehicles in motion on a roadway can be found by dividing the recorded VMT for the link by the average vehicle speed. The analysis produced 24 VIM (VMT/Average Network Speed pairs), relating the three metrics over time of day (shown in Table 5).

Using street geometry, a maximum VIM for the arterial system was assumed to be 25,000 vehicles. Figure 17 shows the relationship between Average Network Speed and VIM. Average network speeds were observed to be between 15 and 25 mph via the Arterial Performance Management Tool during most (non-event) hours of the day. However, data extrapolated from Uber Movement suggest that average arterial speeds can be slower during major events (as low as 7 mph).

Figure 16: Los Angeles Arterial Corridors within the Study Area

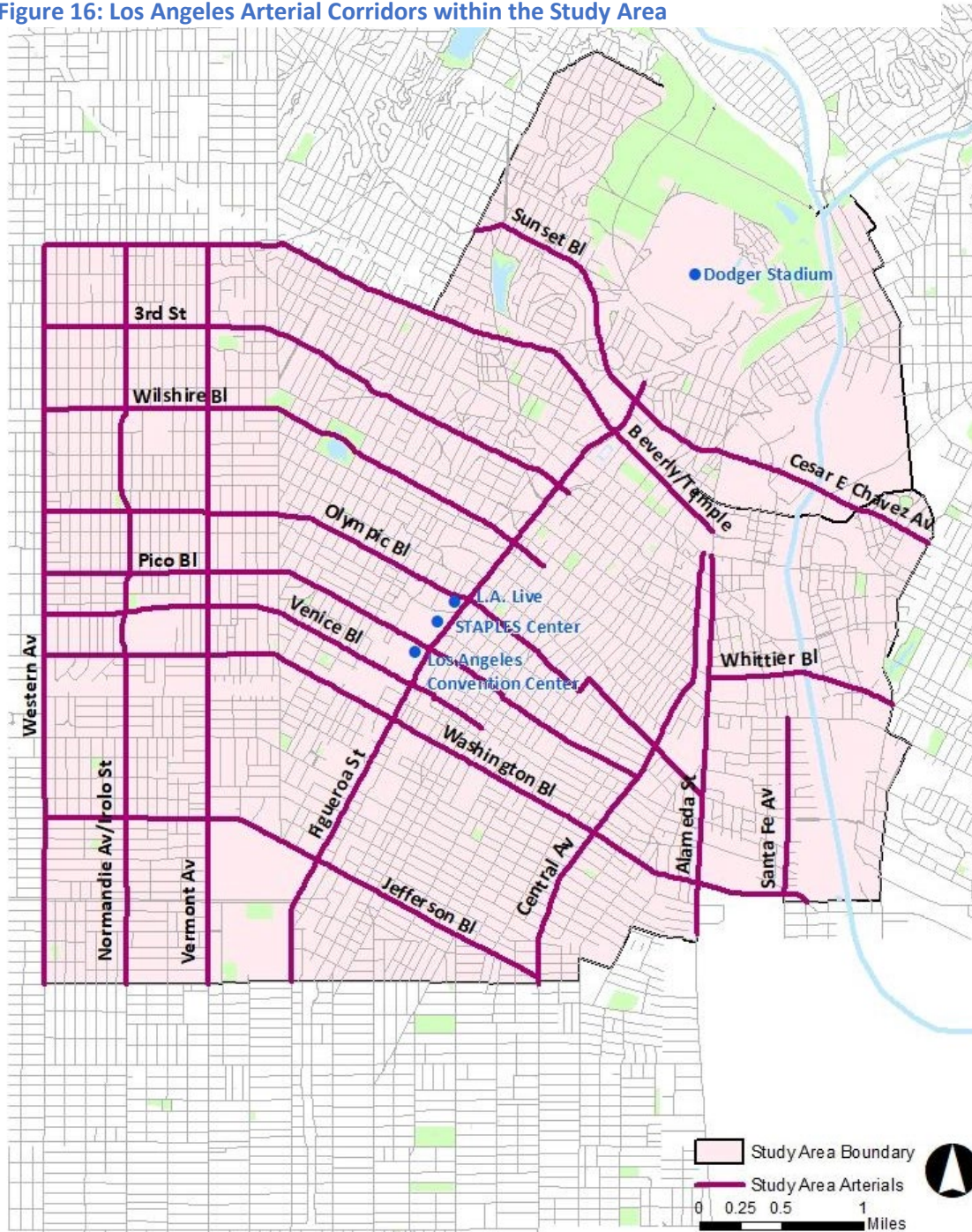
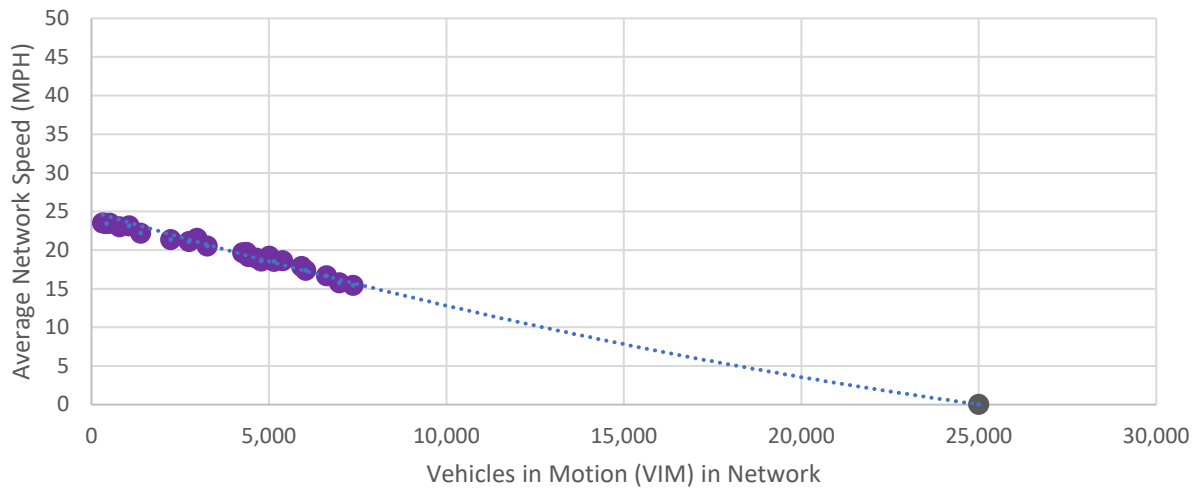


Table 5: VIM, Speed, and VMT over Time of Day

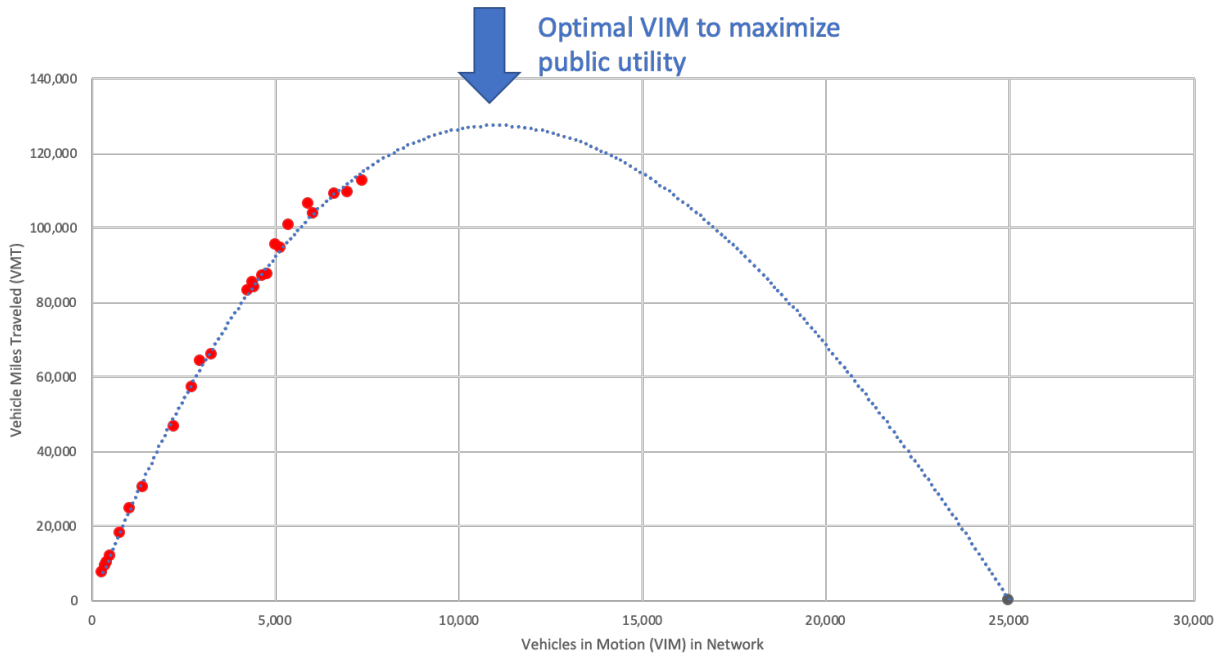
Hour	VIM	Speed	VMT
0	795	23	18180.67
1	521	23	12147.96
2	401	23	9399.601
3	316	23	7451.866
4	437	23	10219.94
5	1067	23	24670.39
6	2975	22	64175.49
7	5391	19	100709.5
8	5926	18	106378.8
9	5011	19	95611.99
10	4377	20	85449.95
11	4266	20	83166.71
12	4425	19	83924.88
13	4649	19	87295.75
14	5146	19	94709.55
15	6042	17	103792.4
16	6627	17	109142.9
17	7376	15	112728.3
18	6983	16	109492.5
19	4790	19	87654.75
20	3269	21	66215.42
21	2749	21	57208.72
22	2235	21	46972.97
23	1392	22	30503.97
MAX	25000	0	0

Figure 17: Speed vs. VIM



Secondly, VMT was plotted against VIM (Figure 18). As described previously, after reaching a VIM threshold, the VMT of the system decreases as street congestion reduces efficiency. The graph below shows the theoretical optimal VMT peaking around ~130,000 miles, at approximately 11,000 Vehicles in Motion (VIM). This condition would result in an average speed of about 12 mph. The curve presented below is an extrapolation designed to fit the data and is subject to assumptions regarding traffic flow and vehicle behavior.

Figure 18: VMT vs. VIM



TNC Trip Ratio

Given the high utilization of the arterials studied above, it’s important to understand how many of those vehicles are TNCs. Using data from Teralytics, the TNC trip percentage of general traffic was found to be between 3-8% in the study area. While these trip volumes are significant, they represent a small minority of overall trips today, according to the data source. The full results from Teralytics are shown in Table 6.

Table 6: TNC Trip Ratio in Central LA

	AM (6 am – 10 am)	Mid-Day (10 am – 4 pm)	PM (4 pm - 8 pm)	Night (8 pm – 6am)
Weekday	3.5%	3.7%	3.6%	5.2%
Weekend	4.1%	4.4%	4.4%	7.4%

LA DOT should continue to track TNC trip volumes as the user demographic and usage evolves and grows over time.

Conclusion

With TNC activity between 3-8% on average, near-term management strategies (occupancy goals, curbside management) may currently have modest general congestion benefits, with a larger impact during major events. With the growth of AVs/MaaS over time, the impact of such strategies will increase. The maximum optimal VIM can inform goals for future management/incentive strategies over time.

4.F Agency Performance Measures

It is important to measure whether LADOT is delivering taxi and other for-hire transportation services within its regulatory realm efficiently, effectively, and equitably. Residents, elected officials, and other interested parties (“stakeholders”) benefit from being able to see and understand the government’s acquisition and use of financial and nonfinancial resources and service efforts and accomplishments.

Performance should be measured to ensure services are of adequate quality; agency assets are being used efficiently, effectively, and expeditiously; and public resources are spent on appropriate activities (spending and budget information). Performance measures include: inputs (financial and nonfinancial resources used), outputs (quantity of services provided), outcomes (the results associated with the provision of services; may include measures of public perception of results), efficiency measures (ratio of inputs to outputs; resources used per unit of output, or the cost per unit of output), and cost/outcome measures (resources used per unit of outcome or result, or the cost per unit of outcome or result).

Goals are a necessary step in measuring performance of a service. Here, the critical service is ensuring the quality and safety of taxi and other for-hire vehicle transportation services through effective regulation and administration of rules, standards, and licensing requirements. The following goals are proposed for LADOT’s taxi service:

1. Increase access to for-hire transportation service.
2. Ensure that all licensed vehicles meet safety and emissions standards.
3. Ensure all vehicles operating for-hire follow LADOT rules and regulations.
4. Provide excellent and measurable customer service to licensees.
5. Promote excellent and quantifiable customer service to passengers.

Agency Resources

The agency has the following resource indicators available to direct in pursuit of its goals:

- Expenditures
- Revenues
- Personnel
- Overtime paid

Where possible, the relationship between an agency’s goals and its expenditures and planned resources, by budgetary unit of appropriation (UA), should be reported to stakeholders. Any one goal may be connected to multiple UAs, and any UA may be connected to multiple goals.

Performance Indicators

For each goal, the identified performance indicators will be used to measure whether LADOT is meeting the objective. These are the key indicators that are the most important for the government to report to stakeholders and will quantify LADOT's efforts toward achieving its major goals and objectives. As LADOT assumes more involvement with other regulatory categories of for-hire vehicles, the agency can develop performance indicators for those categories as well.

Goal 1: Increase access to for-hire transportation service.

Performance Indicators:

- Taxis that are accessible
- Accessible dispatch median wait time (Either a set time or reasonable timetable)
- Accessible dispatch trips fulfilled as a percent of requested trips (New WAV mandate)
- Active taxis with assistive listening devices

Goal 2: Ensure that all licensed vehicles meet safety and emissions standards.

Performance Indicators:

- Safety and emissions inspections conducted
- Safety and emissions failure rate - Initial inspection (%)
- Re-inspection rate (%)
- Safety and emissions inspections completed on schedule (%)

Goal 3: Ensure all vehicles operating for-hire follow LADOT rules and regulations.

Performance Indicators:

- Patrol summonses issued to drivers
- Patrol summonses issued to owners/agents/companies
- *Patrol summonses issued for illegal street hails (drivers and vehicle owners)
- *Patrol summonses issued for unlicensed activity (drivers and vehicle owners)
- Administrative summonses issued to drivers
- Administrative summonses issued to owners/agents/bases
- Violations admitted to or upheld at adjudication/hearing (%)

* Critical Indicator

Goal 4: Provide excellent and measurable customer service to licensees.

Performance Indicators:

- Average wait time at licensing facility (hours:minutes)
- Driver licenses issued
- New licenses issued
- Average time to issue a new driver license from initial application (calendar days)
- Average agency processing time (calendar days)

Goal 5: Promote excellent and quantifiable customer service to passengers.

Performance Indicators:

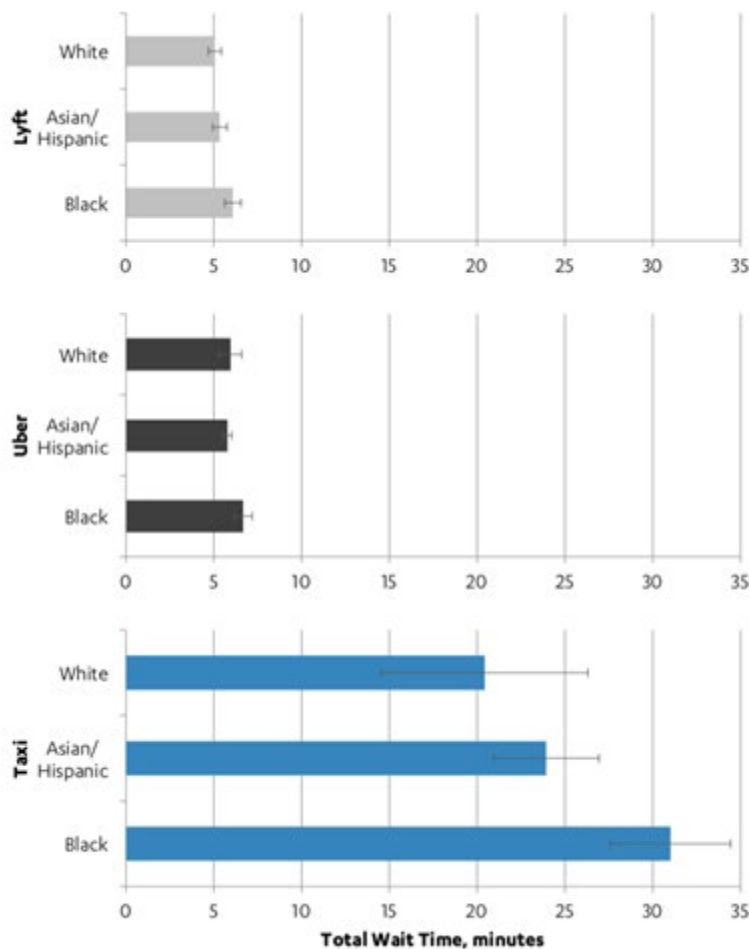
- Driver complaints received
- Complaints that were eligible for prosecution
- Average time to close a consumer complaint (calendar days)
- E-mails responded to in 14 days (%)
- Letters responded to in 14 days (%)
- Average call wait time (minutes:seconds)
- Completed customer requests

4.G Equity and Accessibility

Independent Research

Around the time of the project kickoff, an important study came out at UCLA titled “Ridehail Revolution: Ridehail Travel and Equity in Los Angeles,” by Anne Elizabeth Brown ⁶¹. In it, Brown compared taxis and TNCs to understand differences in customer service and discrimination. The primary finding was that historical reports of discrimination in the for-hire vehicle industry still hold true today, but the differences in service are much more apparent in taxis than in TNCs. The report notes, “Black taxi riders wait between 6 minutes 14 seconds and 14 minutes 47 seconds longer than white riders, controlling for other factors; on average, black taxi riders wait 52% longer than white riders, all else equal.” Figure 18 show the wait time discrepancies between Lyft, Uber and Taxis, for riders of different ethnicities. Black riders wait slightly longer (roughly 1 minute) for Lyft and Uber, while wait times for all ethnicities are predicted to be less than 10 minutes. For taxis the discrepancy is much higher: ~31 minutes (blacks) vs. 20 minutes (whites).

Figure 18: Predicted Total Wait Times Across Services And Rider Race/Ethnicity



Error bars indicate 95% confidence intervals.

⁶¹ Brown, A. E. (2018). Ridehail Revolution: Ridehail Travel and Equity in Los Angeles. UCLA. ProQuest ID: Brown_ucla_0031D_16839. Merritt ID: ark:/13030/m5d847t1. Retrieved from <https://escholarship.org/uc/item/4r22m57k>

Wait time was also longer in taxis more generally, but discrimination is in a league of its own when it comes to service quality. Brown suggests borrowing from the ridehail innovations that TNCs introduced such as driver ratings to increase accountability or incentives for a driver to meet a 100% customer acceptance rate. Similarly, both taxi and ridehail companies could “further deter cancellations by permitting fewer cancellations before a driver receives a ‘time out,’ requiring drivers to provide an explanation for why they cancelled a trip, tracking drivers who cancel frequently, or financially discouraging drivers from cancelling.”

Equitable Service Provisions

Technology, entrepreneurship, and changing customer expectations are disrupting traditional mobility models and reshaping how consumers access, pay, and use transportation. To help public agencies and the private sector ensure that transportation services are accessible to all users, the U.S. Department of Transportation developed the [STEPS framework](#) to aid in identifying and mitigating gaps in equitable service delivery. STEPS stands for – Spatial – Temporal – Economic – Physiological – and Social. Each of these considerations are explained below:

Spatial factors can compromise daily travel needs, including lack of service availability in a particular neighborhood, excessively long distances between destinations, and the lack of public transit within walking distance.

Temporal time barriers can inhibit a user from completing time-sensitive trips, such as arriving at work or completing travel due to lack of service availability at a particular time (e.g., late-night transportation services).

Economic considerations include direct costs, such as fares, tolls, and vehicle ownership costs as well as indirect costs (e.g., smartphone, Internet, credit card access) that create economic hardship or preclude users from completing basic travel.

Physiological factors include physical and cognitive limitations that make using standard transportation modes difficult or impossible for certain individuals, such as children, older adults, and people with disabilities.

Social considerations include social, cultural, safety, and language barriers that inhibit a user’s comfort with using transportation modes and services. Examples of social barriers can include neighborhood crime, poorly targeted marketing, and the lack of multi-language information.

By applying this framework, Los Angeles can identify and remove barriers to ensure that for-hire transportation services are accessible to all Angelenos. In the context of for-hire transportation services, equity concerns commonly center around four areas of concern. Generally, through street hails and cash payments, taxis have been able to serve a number of historically underserved communities.

Un- and Under-Banked Households – Other for-hire services (i.e., TNCs) typically require debit/credit cards for payment. This can be a barrier for consumers who are under-banked or un-banked. As such, the ability for LA taxis to accept cash payment (or alternative payment options, e.g., payment via pre-paid cards and transit fare cards) can be key.

Low-Income Affordability – Both the inability to know a precise fare before beginning a journey and dynamic pricing can present notable barriers for low-income use of taxis and TNCs, respectively. Providing precise fare information in advance of a trip and zone pricing can help overcome the variable pricing uncertainties often associated with many for-hire transportation services.

Digital Poverty – Requiring access to a smartphone and high-speed data can represent a notable barrier to many innovative transportation services. As such, the ability to call a taxi and street hail serves an increasingly important service provisions for households without smartphone access.

Access for People with Disabilities – With the growth of TNCs, LA’s taxi market has increasingly focused on serving older adults and people with disabilities.

Wheelchair Accessibility Service and Standards

Taxis and TNCs in the City of Los Angeles should provide reasonable accommodations to passengers with disabilities, including to passengers accompanied by a service animal, passengers with hearing and visual impairments, and passengers with mobility devices. Common accessibility concerns with for-hire services often include accommodations for:

- Passengers accompanied by a service animal
- Passengers with hearing and visual impairments
- Passengers with mobility devices

There are a number of existing laws that require accessible service for for-hire vehicles. These include the following:

Americans with Disabilities Act (ADA)

ADA is a detailed civil rights law whose goal is to protect people with disabilities from discrimination. Title III protects against discrimination by “public accommodations,” or private organizations or people which own, lease, or run places meant for the public to use. Specifically, Title III of the law also protects against discrimination by transportation services provided by private companies.

Senate Bill 1376: TNC Access for All Act

In September 2018, Governor Brown signed into state law Senate Bill (SB) 1376: TNC Access for All Act. This law requires that the CPUC establish a program related to accessibility for persons with disabilities, including wheelchair users who need a wheelchair accessible vehicle (WAV). Between December 2018 and February 2019, the CPUC began conducting workshops to engage all stakeholders to determine community WAV supply and demand; develop and provide recommendations regarding specified topics for programs for on-demand services and partnerships; and discuss all other topics related to the successful implementation of the law. The resulting program will be funded through the establishment of the TNC Access for All Fund. Since July 1, 2019, all TNCs are required to pay into the fund on a quarterly basis equivalent to, at a minimum, \$0.10 for each TNC trip completed using the TNC’s online-enabled application or platform that originates in one of the geographic areas selected by the CPUC for inclusion in the program. The CPUC has the authority to adjust the fee in each geographic area to different levels based on the cost of providing adequate WAV service within the geographic area. TNCs may be exempted from the payment of the fee in a geographic area if the TNC meets the level of WAV service designated by the CPUC for that geographic area, as specified, and would require the CPUC to reduce the amount of money a TNC is required to pay if it meets certain requirements.

Tax Incentives for Improving Accessibility

Two tax incentives are available to businesses to help cover the cost of making access improvements. The first is a tax credit that can be used for architectural adaptations, equipment acquisitions, and services such as sign language interpreters. The second is a tax deduction that can be used for architectural or transportation adaptations. Section 44 of the Internal Revenue Code, was created in 1990 specifically to help small businesses cover ADA-related “eligible access expenditures.” A business that for the previous tax year had either revenues of \$1,000,000 or less or 30 or fewer full-time workers may take advantage of this credit. The credit can be used to cover a variety of expenditures, such as the purchase of adaptive equipment. The tax deduction was established under Section 190 of the Internal Revenue Code. A business of any size may use this deduction for the removal of architectural or transportation barriers. The renovations under Section 190 must comply with applicable accessibility standards. For more information, please see: <https://www.irs.gov/businesses/small-businesses-self-employed/tax-benefits-for-businesses-who-have-employees-with-disabilities>

Recommendations

The City of Los Angeles should consider requiring that all for-hire services provide reasonable accommodations to passengers with disabilities, including:

- Requiring that for-hire services provide equivalent service to persons with disabilities. Equivalent level of service means that the service available to Persons with Disabilities, is equivalent to the service provided to other individuals with respect to: response time to requests for service, fares charged, hours and days of service availability, ability to accept reservations, restrictions based on trip purpose, vehicles offered, and other limitations on capacity or service availability;
- Prohibiting the denial or refusal of service for passengers accompanied by a service animal;
- Requiring that mobile apps or online dispatch services available to customers are in accordance with W3C guidelines and ADA Section 503 requirements pertaining to hearing and visual accessibility;
- Requiring that for-hire services maintain customer service support services are in accordance with W3C guidelines and ADA Section 503 requirements pertaining to hearing and visual accessibility;
- Requiring reasonable accommodation for passengers with canes, walkers, or other mobility devices that can readily fit within a non-wheelchair-accessible vehicle;
- Requiring that service providers maintain at all times, mobile apps or online dispatch services available to customers that request a wheelchair-accessible vehicle (WAV);
- Requiring that for-hire services provide or contract WAV service within a reasonable time with a wait time not to exceed 30-minutes;
- Prohibiting WAV fares from exceeding comparable non-WAV vehicle fares;
- Prohibiting any type of dynamic or surge pricing for WAV vehicles; and
- Requiring anonymized data relevant to WAV services, such as the number, date, and time of fulfilled WAV trips, WAV trip wait time, the number, date, and time of WAV trips declined by the driver or the company, the WAV trip origin GPS, latitude and longitude, and the WAV trip destination GPS, latitude and longitude.

An emerging policy being employed by multiple municipal jurisdictions is the establishment of wheelchair accessible service funds. These funds charge taxi/TNC riders a per ride fee that is used to subsidize WAV vehicles and/or equivalent transportation services, such as ADA paratransit. Los Angeles may consider the establishment of an Accessible Transportation Fund to mitigate the higher costs of providing WAV service compared to commensurate non-WAV service.

Additionally, Los Angeles may also consider implementing provisions similar to Pennsylvania Code § 1021.16. This law requires on-duty vacant taxi cabs to stop when hailed by a passenger with disabilities. The law establishes a procedure for the driver to determine if they can reasonably accommodate the passenger. If the service request can be reasonably accommodated, the driver shall provide the service. If the service request cannot be reasonably accommodated, the driver shall call a dispatcher immediately to arrange for service by the closest taxicab available that can accommodate the person's request.

Moreover, Los Angeles may consider requiring taxi providers to implement an accessible service plan that identifies:

- The number of conventional vehicles in their fleet;
- The number of wheelchair accessible vehicles in their fleet;
- The average number of daily trips provided with wheelchair accessible vehicles;
- The average number of daily trips provided to passengers with disabilities;
- Hours of operation for wheelchair-accessible vehicles in the fleet;
- Hours of operation for conventional vehicles in the fleet;
- The typical number of wheelchair accessible vehicles operated at any given time;
- Special training or certifications for drivers of passengers with disabilities;
- Methods for dispatching wheelchair accessible vehicles, including methods for prioritization to passengers with wheelchairs and other mobility devices;
- Methods for dispatching and tracking WAV service requests;
- Processes for service accommodation when requests for WAVs exceed the number of available taxis;
- The number of trips unfulfilled or deferred to another service provider when the number of WAVs is insufficient to meet demand;
- WAV policies and procedures for dispatches;
- Training and certification procedures for dispatchers;
- Incentives or consequences (both dispatcher and driver) to encourage priority for people with disabilities;
- Company/franchise WAV policy for owners and drivers;
- Locations of WAVs within allowable operating area;
- List of contracts where WAVs are required;
- List of locations where WAV taxis wait for passengers that are changing modes of transportation; and
- Methods of outreach used to promote the availability of WAVs.

Other potential strategies to enhance WAV accessibility could include:

- Paying the driver a percentage of the trip fee to encourage the prioritization of wheelchair trips; and
- A city-wide grant program to expand the number of WAVs in taxi fleets. Such a program could provide grants for the purchase and/or retrofit of taxi vehicles and/or provide grants that offer financial incentives for taxicab businesses to offer accessible services to people who use wheelchairs.

Methodologies for Measuring and Ensuring Equitable Service Standards

A central component to ensuring service equity throughout Los Angeles is data. Despite the importance of evaluating equitable service provisions over time, data limitations may hinder the ability of Los Angeles to effectively measure and monitor equitable service provisions. A first step toward addressing these limitations is to better understand the data needs and gaps. This section presents a generalized evaluation framework that can be used for assessing equity impacts within the context of for-hire vehicle services. Included is a discussion of the metrics and data sources that are needed to evaluate equitable outcomes.

[Shaheen et al. \(2018\)](#) outlines five steps which serve as a generalized process that can be applied to evaluate a project:

1. *Define Objectives* – Identify equity goals and, if possible, state a general measure and direction of the desired impact, e.g., “reduce WAV wait times.” This will be defined within some user population or equity issue.
2. *Define Hypotheses* – Translate goals into more specific hypotheses that suggest an expected result, e.g., “improve WAV wait times” might be more concretely stated as “the average WAV wait time of the population in Central LA will fall.”
3. *Define Metrics* – Identify what should be measured to assess the degree to which hypotheses have come true, e.g., “average WAV wait time per a person with disabilities.” The metrics should be theoretically computable, even if they are not producible with currently available data. Potential Equity Metric Categories:
 - Demographic profile of taxi users and non-users
 - Spatial distribution of locations and users served
 - Demographic distribution of areas served
 - Average trip cost per mile
 - Average trip wait time
 - Average trip journey time
 - Average total trip time (wait plus journey) compared to other modes
4. *Define Data Sources* – Identify context-specific data sources that can populate the metrics. These will define the core components necessary to calculate a metric, and multiple data sources may be needed, e.g., wait times, origin/destination, equivalent wait times on other modes, etc. These data may or may not exist or be available to those evaluating the equity.
5. *Define Methods of Analysis* – Define the methodologies that will guide data analysis. In some cases, when there is a specific method that is considered to be the “preferred” method, methodologies will lead to the evaluation design. In other cases, metrics can be evaluated using a number of different statistical methods, ranging from basic to complex.

This process is essential to provide an evidence-based approach for measuring equitable outcomes. This evaluation framework can be applied to equity analyses enabling LADOT in understanding and collecting the right data to evaluate and monitor equitable service standards among for-hire vehicle services.

4.H Staffing Implications

Introduction

LADOT has regulatory authority over taxicab and private medical transportation companies, vehicle owners, and drivers. Within LADOT, the For-Hire Policy and Enforcement Division handles the daily administration and enforcement of adopted regulations for taxicab and non-emergency transportation services. The division develops policies applying to for-hire services in the city, such as curbspace management. Permission to operate taxicab service in the City of Los Angeles is approved by the Board

of Taxicab Commissioners, the City Council, and the Mayor through the granting of a taxi franchise. LADOT enforces adopted regulations to ensure that vehicles are safe and that service levels are professional. This includes confirming that drivers are licensed and vehicles insured, testing drivers, and performing safety inspections on vehicles. LADOT and the Board of Taxicab Commissioners also establish taxi rates paid by customers. LADOT investigates alleged wrongdoing by drivers and recommends discipline for action by the Board of Taxicab Commissioners. Sustained wrongdoing can result in revocation of the company's franchise and/or driver's permit to operate a taxicab in the city. In FY 2017–18, the 23-person division oversaw 9 franchised taxicab companies, 2,995 permitted taxicab drivers, and 2,361 authorized taxicabs, in addition to 190 private medical transportation companies, 4,418 permitted medical transportation drivers and attendants, and 1,157 authorized vehicles. LADOT and LAPD also investigate taxicabs and TNC's operating illegally in the city, frequently referred to as "bandit" taxis.

Strategic Organizational Staffing Principles

LADOT's For Hire Policy and Enforcement Division staffing decisions could be guided by the following principles:

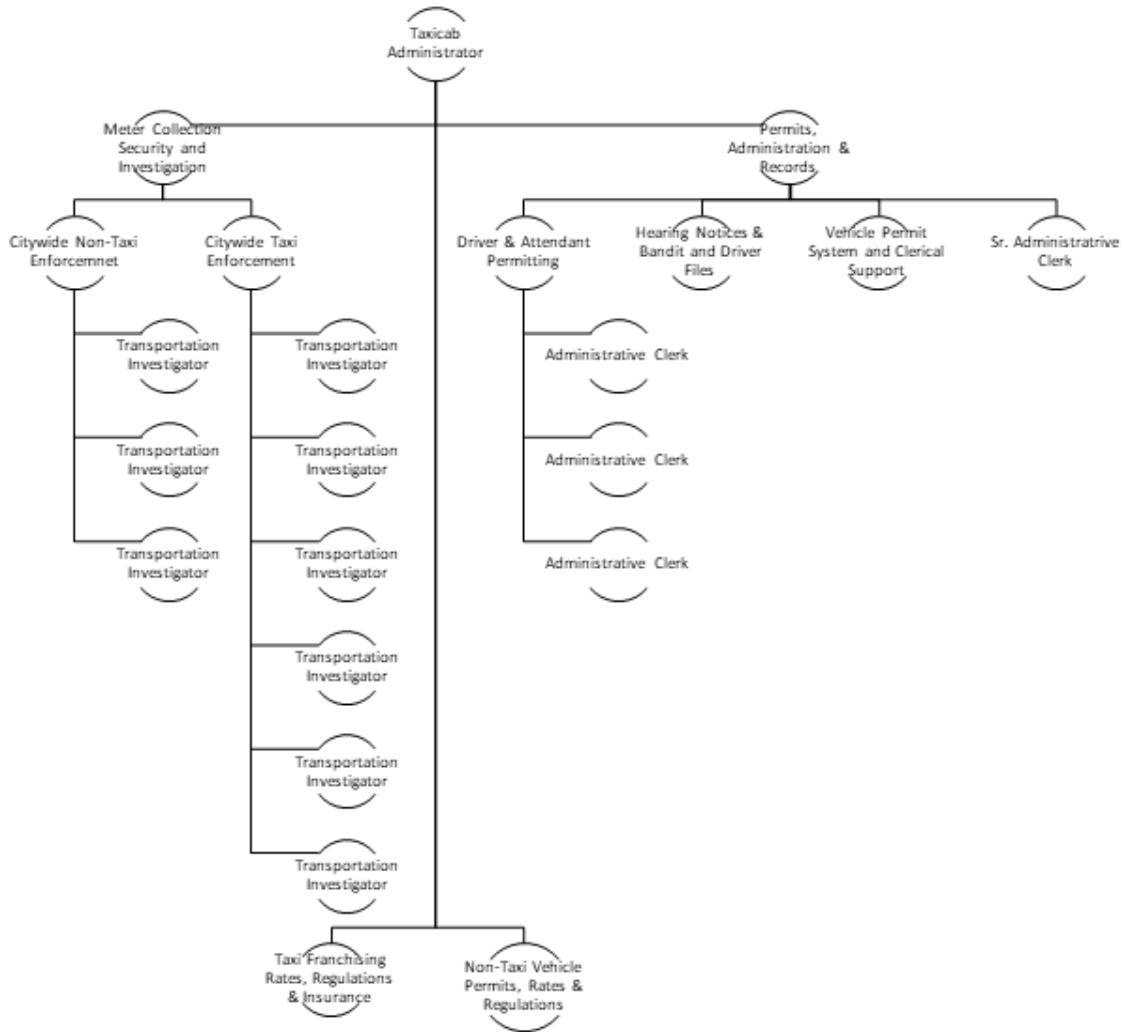
- Ensure that all staffing decisions serve the mission of the LADOT;
- Align fully with the department's and city's long-range plans, and changes within the broader transportation marketplace;
- Assure the integrity and quality of its regulatory role by employing personnel who are qualified by appropriate education, training, and experience to provide and support these programs and services;
- Honoring carry-over practices and commitments including replacing employees that retire or transfer as long as those replacement positions remain consistent with the department's strategic plan;
- Increase professional development opportunities that will improve performance of all employees;
- Maintain competitive salary and benefits packages to ensure the attraction and retention of the best qualified transportation regulators; and
- Adapt staffing levels for changes in mobility, such as shared micromobility, TNCs, last mile delivery, automated taxis, urban air mobility, and other innovative and emerging transportation technologies.

Existing Organization and Staffing

The objective of LADOT's for-hire services staffing plan is to assess the human resource needs of the For-Hire Policy and Enforcement Division in light of the organizational direction outlined in this report. This plan aligns with LADOT's goals to ensure that the city makes staffing decisions which directly support for-hire transportation services regulation, has the human resources it needs to meet the current requirements and long-term goals of the department; creates and maintains institutional capabilities, policies, and practices in an ever evolving transportation ecosystem; regularly assesses its employment needs consistent with the department's mission; and fairly protects the interests of consumers, drivers, franchises, and other stakeholders. At present, the division is organized by essential regulatory

functions: vehicle and driver permitting, regulating operators, and enforcement. An organizational chart is shown in Figure 19.

Figure 19: For Hire Policy and Enforcement Division Organizational Chart



Vehicle, Driver, and Attendant Permitting

The For-Hire Policy and Enforcement Division handles driver and vehicle permitting for taxicabs, private ambulances, and non-ambulatory medical vehicles. In FY 2017–18, the Division processed and issued a total of 5,824 driver permits. Based on the Division’s 2018 organization chart that was provided by LADOT, there are four staff positions dedicated to driver and attendant permitting (one Sr. Administrative Clerk, and three Administrative Clerks) and one position – a Sr. Administrative Clerk – is dedicated to vehicle permitting (“Vehicle Permit System & Clerical Support”; Sr. Administrative Clerk). Annual departmental vehicle inspections are also required of taxicabs, private ambulances, and non-ambulatory medical vehicles. However, LADOT did not provide any information about the staffing for vehicle inspections. LADOT Investigator staff are responsible for enforcement and vehicle inspections. During the last fiscal year, 1,213 non-taxi vehicles were inspected. 418 new taxi vehicles were inspected with an additional 1,400 taxi vehicles required to be annually inspected by LADOT.

Operator Regulations

One staff position is dedicated to addressing permits, rates, and regulations for the 190 private ambulance and non-emergency medical transportation companies (a Management Analyst). One staff position is dedicated to “Taxi Franchising Rates, Regulation & Insurance” for the nine taxicab franchisees (a Sr. Management Analyst).

Enforcement

The For-Hire Policy and Enforcement Division investigates alleged wrongdoing by drivers and recommends discipline for action by the Board of Taxicab Commissioners for taxicab drivers or by the Board of Transportation Commissioners for non-emergency vehicle drivers. LADOT, along with the Los Angeles Police Department (LAPD), investigates taxicabs and TNC’s (e.g., illegal TNC street hail pickups for cash not connected with their app.) operating illegally in the city, frequently referred to as “bandit” taxis. In FY 2017–18, there were 526 bandit arrests and in FY 2018-19 there were 459 bandit arrests.

Within the LADOT For-Hire Policy and Enforcement Division, seven positions are dedicated to citywide taxi enforcement (one Sr. Transportation Investigator and six Transportation Investigators) and four positions are dedicated to non-emergency transportation (one Sr. Transportation Investigator and three Transportation Investigators). All of the investigations staff report to the Chief Transportation Investigator. In addition, there is one position that is dedicated to “Hearing Notices & Bandit and Driver Files” (a Sr. Administrative Clerk).

Table 7: For Hire Policy and Enforcement Division Staff Salary Costs

Job Class	Cost /Hour	Number of Positions	Direct Cost	CTO (22.3%)	Fringe Benefit (48.1%)	Central Services (27.52%)	Admin (13.65%)	Total
Taxicab Administrator	71.2	1	\$148,096.00	\$33,025.41	\$71,234.18	\$40,756.02	\$20,215.10	\$313,326.71
Sr. Mgmt Analyst II	71.9	1	\$149,552.00	\$33,350.10	\$71,934.51	\$41,156.71	\$20,413.85	\$316,407.17
Sr. Mgmt Analyst I	58.02	1	\$120,681.60	\$26,912.00	\$58,047.85	\$33,211.58	\$16,473.04	\$255,326.06
Admin Clerk	26.31	3	\$164,174.40	\$36,610.89	\$78,967.89	\$45,180.79	\$22,409.81	\$347,343.78
Ch Transp Investigator	53.09	1	\$110,427.20	\$24,625.27	\$53,115.48	\$30,389.57	\$15,073.31	\$233,630.83
Mgmt Analyst	49.12	1	\$102,169.60	\$22,783.82	\$49,143.58	\$28,117.07	\$13,946.15	\$216,160.22
Sr. Admin Clerk	32.48	4	\$270,233.60	\$60,262.09	\$129,982.36	\$74,368.29	\$36,886.89	\$571,733.23
Sr. Transp Investigator	47.45	2	\$197,392.00	\$44,018.42	\$94,945.55	\$54,322.28	\$26,944.01	\$417,622.25
Transp Investigator	40.49	9	\$757,972.80	\$169,027.93	\$364,584.92	\$208,594.11	\$103,463.29	\$1,603,643.05
TOTALS		23	\$2,020,699.20	\$450,615.92	\$971,956.32	\$556,096.42	\$275,825.44	\$4,275,193.30

(Source: LADOT)

Staff Levels Assessment and Gap Analysis

Both in terms of the total number of full-time employees and the type of position (skills, experience, etc.), the human resources necessary for LADOT to conduct proper and efficient permitting and

enforcement for the taxicab industry (permitting of vehicles and drivers, enforcement, and administration) will depend on multiple considerations that impact regulatory operations. These operational factors and issues include the following:

- The number of companies, drivers, and vehicles operating in the jurisdiction
- Jurisdiction size (population and geography)
- Permitting & Standards
 - Volume of permits issued (new and renewal)
 - Variety of different permits required
 - Level of qualifications for obtaining the permit
 - Frequency of permit renewal
 - Level of driver background checks/driver fitness (finger prints vs. name check)
 - Standards for driver background checks (finger prints vs. name check)
 - Whether the regulator conducts or requires driver testing, training, or education
 - Whether the regulator conducts the drug and alcohol testing, and what types of testing is required
- Vehicle Inspections
 - Whether the regulator conducts or requires vehicle inspections
 - Frequency of vehicle inspections
- Compliance & Enforcement
 - Number of regulations that need to be enforced
 - Whether enforcement requires staff inspections, patrols, or investigation or could be accomplished through data or technology (*e.g.*, technology to track and monitor vehicles accessing LAX or curbside space or using specialty lanes)
- Data
 - Type and volume of data collected
 - Frequency of collection
- Customer Service
 - Level of customer service that is provided and the number of customers (including how complaints and service issues are received and addressed)
- Facilities Maintenance
 - Maintenance of any physical structures, facilities, or other infrastructures required for enforcement and compliance

Generally, more regulations will require more staffing to administer and enforce those regulations. Similarly, there is a correlation between the number of companies, drivers, and vehicles that the regulator oversees and the number of staff needed to oversee them.

In addition to these operational considerations, a number of other factors could impact recommended staffing levels, such as multi-jurisdictional coordination (particularly if LADOT assumes a regional role for taxi regulation) and the potential for data and other automated processes to reduce staff workloads or

create needs for additional staff with different types of training (e.g., data analysts). Both of these topics are discussed below.

Countywide Regulation of Taxis

LADOT has begun working with other incorporated cities in Los Angeles County on multi-jurisdictional coordination, specifically, the centralized regulation of vehicles and drivers by LADOT. California state law⁶² requires that taxicab companies must maintain their vehicles in a safe operating condition, and in compliance with the Vehicle Code, subject to annual inspection by the city or county where they are licensed at either a National Institute for Automotive Service Excellence-certified facility, or a California Bureau of Automotive Repair-licensed facility. Although LADOT does not have data regarding the total number of additional drivers and vehicles that it would be responsible for licensing—and has not provided any data on the current staff and costs of inspecting vehicles—the expected increase in driver and vehicle permitting will require additional staff and resources. According to the U.S. Bureau of Labor Statics, there were 7,150 individuals employed as taxi drivers and chauffeurs in the Los Angeles-Long Beach-Glendale metropolitan area. According to LADOT statistics, in FY 2017–18, there were 2,995 permitted taxicab drivers in LA. Meaning, LADOT’s taxi permitting volume could more than double.

Incentives System: Access and Use Permits, Data, etc.

If LADOT introduces new programs geared toward incentivizing market players, including both taxis and TNCs—such as permits for accessing and using roadways or facilities—this will necessarily require additional staff. As a preliminary matter, staff would be required to determine the locations of taxi stands, pick-up/drop-off zones, and dynamic curb management, among other location-based incentives. Once sites are selected, additional LADOT administrative staff would be needed to process permit applications and administer the program. This would include administrative staff to process applications, analysts to ensure that applicants meet minimum qualifications, compliance personnel and information analysts to ensure permittees maintain certain performance requirements and comply with agreed upon standards, and investigators to ensure no one is impermissibly accessing or using the privilege without the necessary permit.

Data is essential to maintaining lighter—and more precise and flexible—regulatory systems. Under the proposed regulatory framework, having access to certain privileges will be conditioned, in part, on the permit holder providing LADOT with certain data (vehicle occupancy, pick-up and drop-off location, etc.). Therefore, data and information analysts dedicated to permitting approval, analytics, and compliance monitoring would be required. Depending on whether compliance is monitored weekly, monthly, quarterly, or semi-annually, this task may require additional staff time.

There is technology to automate and reduce manual analysis, such as OpenSky’s data management software services, taxi compliance, and inspection mobile application systems used in Ireland.

Potential Organizational Structure

The For-Hire Policy and Enforcement Division may be able to improve future performance by adapting their organizational structure to changes within the transportation ecosystem. Potential organizational structures could include:

⁶² See Cal. Gov’t Code § 53075.5

- Organization based on franchise type such as, taxis/TNCs, SAVs, HOV/Microtransit, goods delivery, urban air mobility, and shared micromobility;
- Organization based on mode and if it is automated or human driven, such as vehicle services, automated vehicle services, aviation services, and low-speed and active transportation;
- Organization based on mode and use case, such as surface passenger transportation, urban air mobility, goods delivery, and low-speed and active transportation;
- Organization based on passenger delivery and goods delivery; and
- Organization based on functional duties, such as certification, enforcement, etc.

Each of these are summarized in the sample organizational charts that follow. Additional organizational frameworks could be considered as the LADOT either continues, adapts, or replaces the existing franchise system and as the transportation ecosystem evolves. Regardless of the potential direction of

Basic Planning Recommendations

- Engage stakeholders and assemble an analysis and planning team that may include key managers, representatives from other departments who are involved in taxi regulation business processes, IT support personnel, human resources representative(s), and other key stakeholders.
- Review the division's mission, key constituents, stakeholders, partners, and their needs.
- Conduct an external scan to identify emerging challenges and opportunities.
- Inventory internal strengths and weaknesses.
- Identify a desired regulatory vision, including goals and outcomes to achieve this vision.
- Analyze current processes, including core functions and potential reasons for restructuring and how they will support or add value to the Division and/or the LADOT.
- Compare data to known benchmarks and identify performance gaps, i.e. gaps between actual vs. desired performance.
- Identify your opportunities for cost reduction, improved efficiency, and/or increased effectiveness and set improvement targets.
- Determine if a different organizational structure is needed to support the improved business processes, to support customer needs, to meet department/city goals, and to achieve desired outcomes.
- Determine whether the proposed new structure is in alignment with those in other divisions, vertically and horizontally, as appropriate.
- Develop an implementation plan that may include:
 - Clarifying who has the decision-making authority;
 - An updated description of the mission, vision, and goals of the division;
 - The timeframe and implementation plan for changing business processes, organizational roles, and the organization structure, if needed;
 - Before and after flow charts to help clarify the transition of business processes;
 - A new organization chart;
 - Job descriptions and classifications for the new positions; and
 - A plan for filling positions in the new structure. Options include lateral reassignments as well as full recruitments for all new positions.

an organizational restructuring effort, the following recommendations could be implemented. These recommendations are not intended to substitute involving subject matter experts and key stakeholders.

Figure 20: Option A – Organization Based on Franchise Type

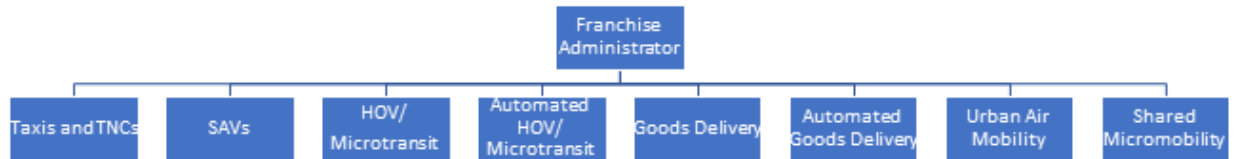


Figure 21: Option B – Organization Based on Mode and Automation

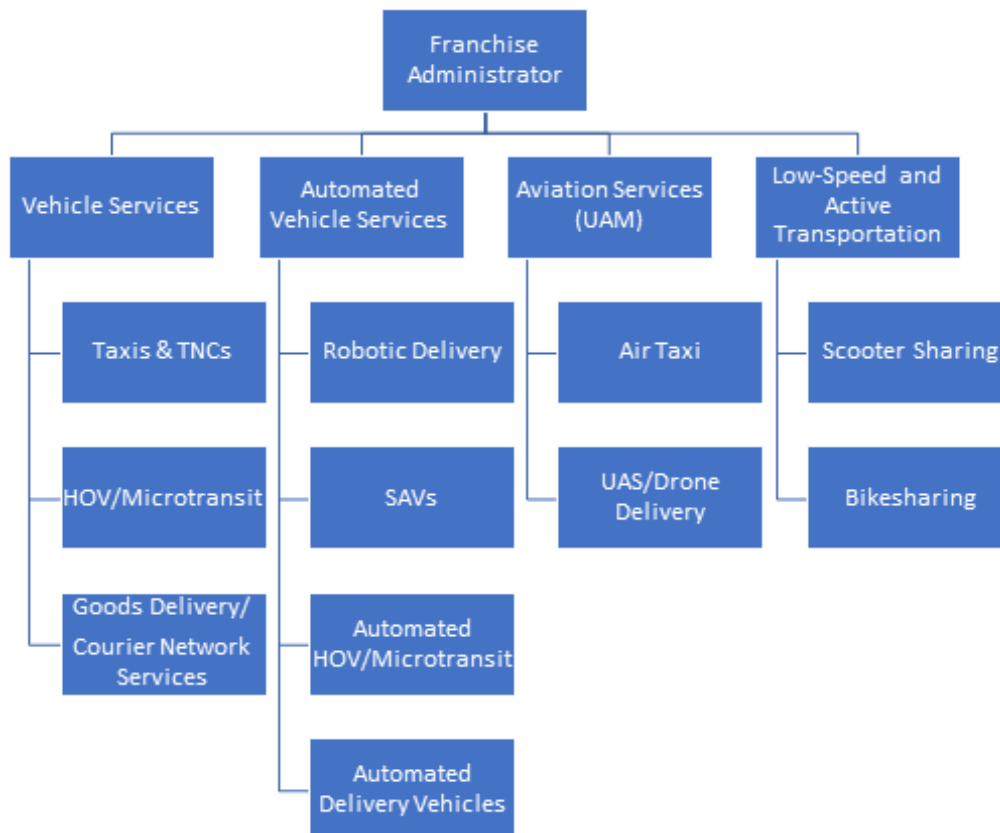


Figure 22: Option C – Organization Based on Mode and Use Case

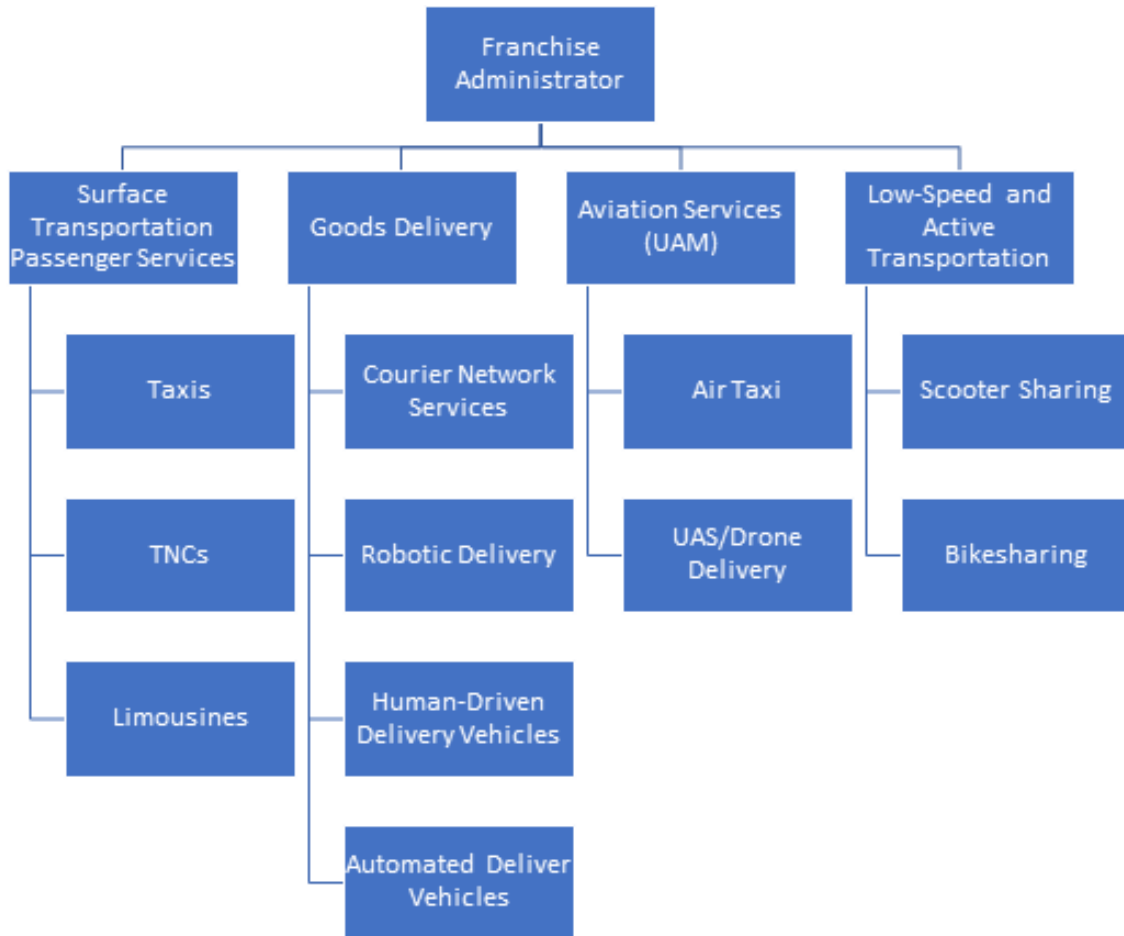


Figure 23: Option D – Organization Based on Passenger Mobility and Goods Delivery

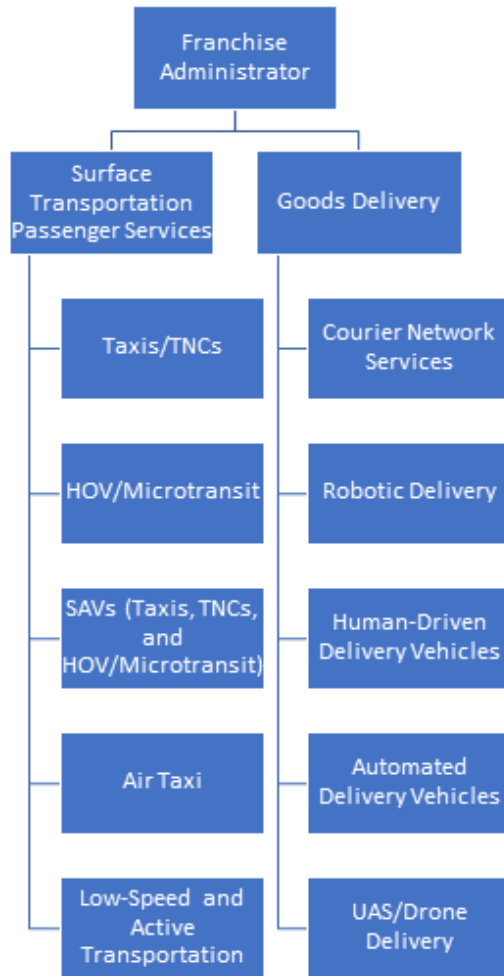
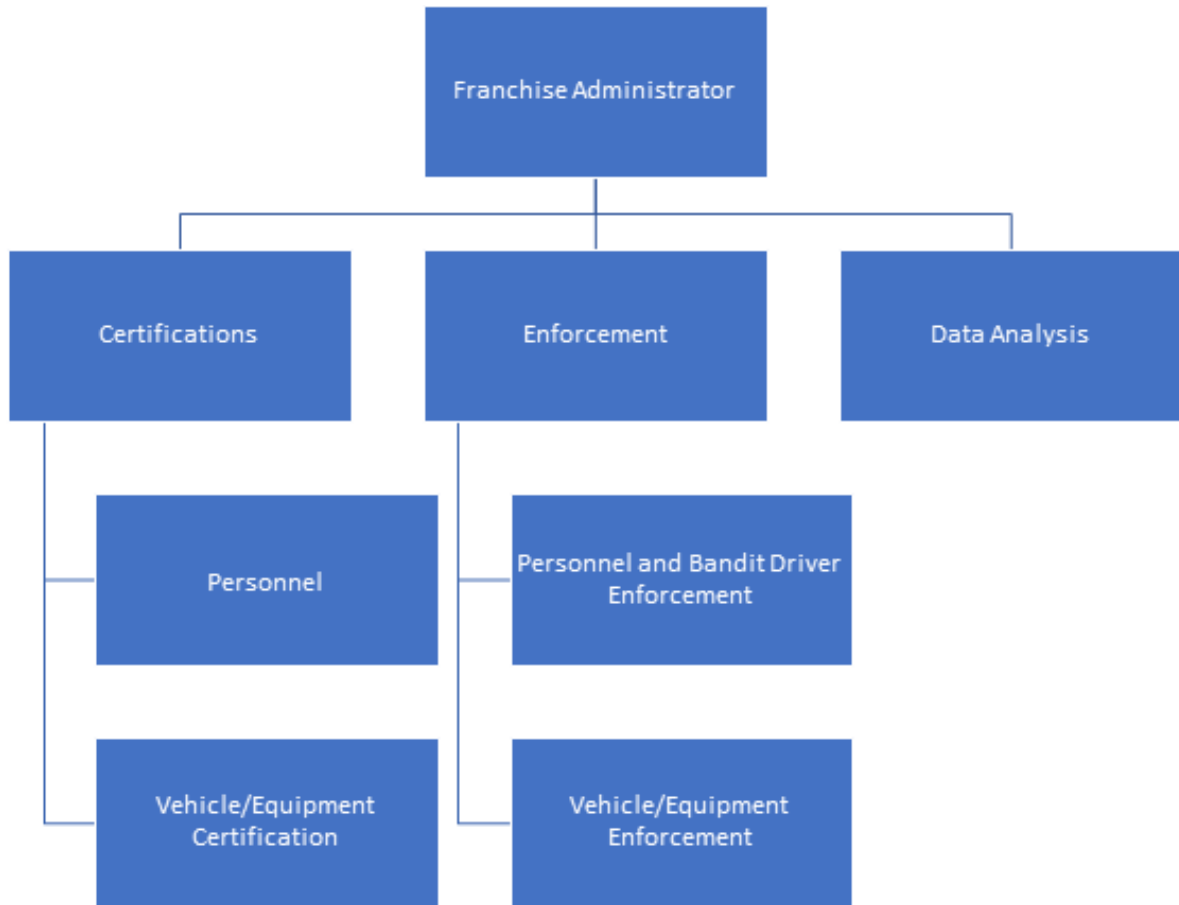


Figure 24: Option E – Organization Based on Functional Duties



Recommendations for Next Steps

To adapt to the changing transportation ecosystem and for-hire vehicle service regulatory environment, the LADOT could pursue the following three steps:

1) Consider Reorganizing LADOT's For-Hire Policy and Enforcement Division

The LADOT could consider organizing the LADOT's For Hire Policy and Enforcement Division to adapt to changes in the for-hire vehicle services industry, expand the scope of the Division to include other private transportation services (e.g., shared micromobility, automated vehicles, last mile delivery, urban air mobility, etc.), or both. The potential for a reorganization should be considered early to help refine future staffing needs and functional roles.

2) Conduct an Ongoing Staffing Needs Assessment

After selecting a proposed organizational structure, the LADOT could conduct ongoing staffing needs assessment at regular intervals (e.g. annually) using one or more of the following indicators:

- Data showing the need for increased regulatory capacity (e.g., a growth in the number or complexity of for-hire services, such as drivers, vehicles, modes, etc.);
- Changes in local or state regulatory requirements;
- Accuracy of the forecasts of anticipated minimum levels, growth, and attrition rates; and
- Other considerations as the for-hire and transportation sector evolve.

This staffing needs assessment can be used to monitor estimated FTE requirements as the department simultaneously implements a new regulatory framework, and potentially a new organizational structure.

3) Professional Development

Recognizing that a potential department reorganization could impact existing staff roles, the department should provide its workforce with training and professional growth opportunities to enable them to fulfill the requirements of their positions and to adapt their training to meet the needs and requirements of an evolving for-hire transportation ecosystem, such as automated vehicles and aviation services (e.g., urban air mobility). Professional development activities can include staff development opportunities, transportation technology training, transportation regulator workshops, retreats, and other training opportunities. The department should establish and maintain professional development opportunities to provide succession planning for all relevant positions so that the LADOT is able to maintain the quality of for-hire regulation services during employee turnover.

5. Specific Operating Issues

5.A Infrastructure Requirements

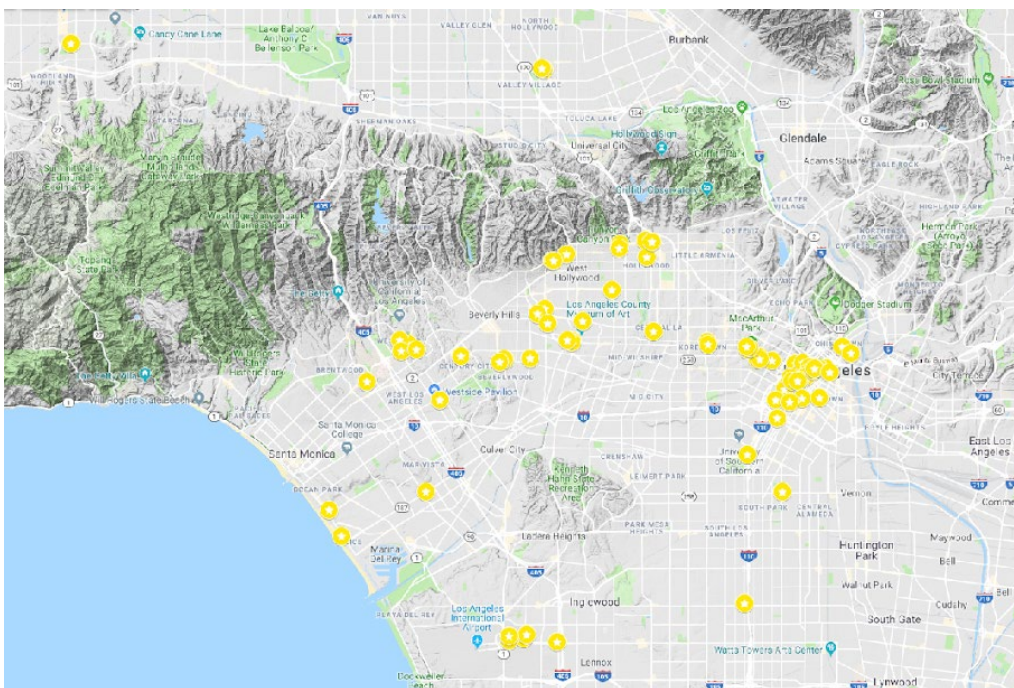
Types of Taxi/FHV Infrastructure Today

As of 2016, Los Angeles has 80 designated taxi stands. Some are very small with space for one vehicle, while the largest has space for eight vehicles. They are shown in Figure 25. Ideally the City would designate on-street taxi/FHV infrastructure commensurate with demand, but without data on taxi/FHV ridership activity, evaluation of the infrastructure must be more qualitative.

Most of the existing on-street infrastructure for taxis and FHV appears to fall into the following categories.

- **Low-demand taxi stands** where vehicles dwell for long times waiting for a customer to walk up. As more and more rides are requested via smartphone, demand for this use of street space is declining. Indeed, Google Streetview shows that several taxi stands designated in 2016 have since been eliminated.
- Locations with **significant taxi/FHV demand** for at least part of the day, but without surges that overwhelm capacity. These areas may include transit centers and mid-size event venues. The level of demand is sufficient to justify this use of street space.
- Locations that sometimes experience **surges in taxi/FHV demand beyond the capacity** of the taxi stand. These facilities include the LA Convention Center (capacity 125,000), Rose Bowl Stadium (capacity 90,888), the LA Memorial Coliseum (capacity 78,467), and LAX Airport. Specialized operational techniques are used to optimize the efficiency of taxi/FHV operations in these situations, as the following section will describe.

Figure 25: Designated taxi stands in Los Angeles as of 2016

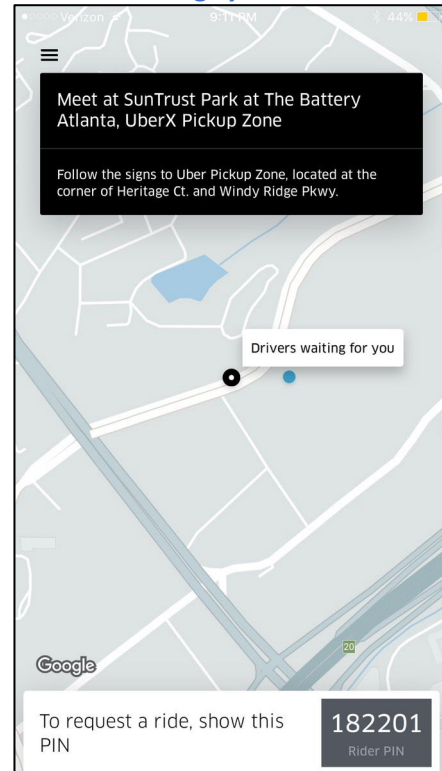


Taxi/FHV Operations for High Demand Events

At high-demand events where demand exceeds the capacity of a taxi stand, special operational procedures are needed to avoid a breakdown in taxi/FHV operations. Typically, the local authority will designate space for taxi/FHV staging, customer queues, and pick-up/drop-off – however, the degree of control exerted can vary. The following strategies are often required by local authorities or implemented by private operators.

- **Geofences** are often used to restrict where pick-ups and drop-offs are permitted at an event. This ensures operational consistency and reduces the congestion due to ad hoc pick-ups/drop-offs.
- Creating **multiple boarding points** increases the capacity of taxi/FHV service at an event. A typical taxi stand only processes one customer at a time, through the front vehicle in the queue. However, a larger flow of customers can be processed simultaneously if there are multiple boarding points. If this approach is used, the boarding points should be clearly numbered or labeled for customers to identify.
- Because matching customers and drivers becomes difficult with large crowds, **customer pincodes** may be used to make matches instead of TNC applications. When the driver enters their customer’s pincode, the application will show them the destination of the customer who has boarded. This pincode matching approach has been used at major events including the Super Bowl, Coachella, the PGA Championship, and Airports such as LaGuardia and LAX. (For smaller events, customers may still be able to find their app-matched driver using colored lights to distinguish them.) An example is shown in Figure 26.
- When assigning space for taxi/FHV operations, local authorities must consider whether to designate different spaces for taxis and each TNC, or whether to combine the different services. While separating the operations may avoid technical challenges, it may confuse customers and reduce overall efficiency.

Figure 26: Example of a pincode driver matching system



To illustrate taxi/FHV practices at major events, the following is a review of the cities that hosted four recent Super Bowl games. For each city, an overview on how they dealt with taxis and TNCs is provided, followed by siting standards.

Santa Clara, California

Super Bowl L, held at Levi’s Stadium in Santa Clara, CA in 2016, was the first Super Bowl where attendees could take Uber to the event. As with other Super Bowls, the TNC had its own pick-up/ drop-off zone. Taxicab stands are maintained and occupied only as provided by laws and ordinances of the City of Santa Clara.

In San Francisco, where “Super Bowl City” and the “NFL Experience” were held in conjunction to the game, three temporary taxi stands were set up near the events. During this time period, taxis were also allowed to use transit-only lanes and streets that were closed to private auto (including Ubers and Lyfts).

Houston, Texas

Houston, Texas hosted Super Bowl LI in 2017 at NRG Stadium. Similar to Minneapolis, Uber and taxis had designated drop-off/pick-up locations on game day. Only taxis that were vetted and approved by the City of Houston Administration of Regulatory Affairs Department were allowed into their specified lot. Other for-hire vehicles (such as black cars and limos) were required to purchase parking permits at the official Super Bowl parking website, as there was no designated pick-up/drop-off location for them. An ADA accessible lot was also available, requiring a state-issued ADA tag and a parking permit. Mobility assistance services were also made available for fans arriving in other parking lots, at the Taxi/Uber drop off locations, or by Metrorail, and a corresponding hotline and email existed to make reservations.

For fans attending Super Bowl LIVE (held in downtown Houston) prior to game day, Uber was provided with a designated drop-off and pickup point. A “geo-fence” was created around the area; if riders opened the app outside the area, they were not able to order an Uber. Instead, Uber would direct them to the designated drop-off/pick-up zone. Dynamic geo-fencing of excluded zones and the ability to “nudge” passenger pick-ups and drop-offs this way has proven promising when tried by ride service providers around special events and specific zones.

It is set forth in the Houston Code of Ordinances that the city’s traffic engineer and authorized assistants, in consultation with the parking official, are authorized to designate spaces on streets of the city for the use as “taxi zones.” The zones are required to be marked with appropriate signage to indicate the location of such zones. Taxi zones may be designated at or near entrances to hotels and passenger depots (train or busses) and airports.

Minneapolis, Minnesota

Minneapolis hosted Super Bowl LII in 2018 at the U.S. Bank Stadium. To manage for-hire vehicle traffic, Uber, Lyft, and taxis each had their own designated pick-up and drop-off lots at the stadium. No other vehicles-for-hire service (limo, sprinter, mini bus, or motor coach) were allowed drop-off/pick-up privileges. If attendees did not arrive by taxi or rideshare, and their ride did not have a ticket or parking permit, there was no designated drop-off area. An ADA lot was also made available, which required attendees to have state-issued ADA tags and a parking permit purchased from the official Super Bowl parking website.

General taxi stand governance is set forth in the Minneapolis Code of Ordinances. The City Engineer and licensing official are responsible for recommending “locations on public streets in the vicinity of retail stores, medical facilities, and multi-family residential business district outside the central business district.” The city council may add to or modify taxi stands by appropriate ordinances from time to time.

Rogue Taxi Stands

In part because there is currently no consistent process or policy for designating taxi stands in Los Angeles, rogue taxi stands have been observed where a hotel or other entity will designate their own taxi stand using their own signage. Recognizing that TNCs,

microtransit and other for-hire vehicles will create an increased demand for curbside pick-up and drop-off zones over time, a more established process for requesting and designating curbside loading areas for for-hire vehicles, combined with enforcement of rogue taxi stands, could facilitate a more orderly and predictable taxi stand/TNC loading zone experience.

Figure 27: Design interventions for driver relief. Source: Design Trust for Public Space, “Designing the Taxi” (2015)



Recommendations

Generally, all it takes to have a safer and more convenient taxi pick-up and drop-off system for events of all sizes is giving up parking spaces (metered or non-metered), parking lots, and/or curb space to create designated areas that will allow traffic to flow better. Dedicated lanes for taxis and other for-hire vehicles that are similar to bus lanes, combined with passenger loading and unloading zones, could ease movement for vehicles without drastically altering the existing streetscape. These areas could provide safer access for passengers and cut down on dangerous driving by the for-hire vehicles trying to grab fares.

For drivers, active and relief stands should be made available. Active stands allow for rider pick-up without the need for drivers to cruise around, while relief stands allow drivers to park and take breaks. Existing infrastructure, such as fences, at relief stands can be transformed into temporary furniture, like the benches pictured in Figure 27, so drivers can get out of their cars to stretch, rest, and interact with one another.

Need for Taxi/FHV Data

It is crucial that LADOT have reliable data about the usage of its transportation facilities in order to make informed decisions. The fact that data about TNC activity is not available to LADOT is a major obstacle to crafting appropriate transportation policies. We recommend that LADOT continue working with appropriate stakeholders to secure TNC data, and that this data be required to comply with the City's Mobility Data Specification (MDS) for shared ride providers.

Without data from the TNCs themselves, LADOT may still be able to understand TNC usage using data from third-party vendors. Companies such as Teralytics and Streetlight now are able to derive travel patterns based on cell phone location data. These providers are able to identify trips made by taxi/TNC, which could allow LADOT to identify hot spots where street use policies might be reassessed and to assess the utilization of existing infrastructure. An example use of this data is shown in Figure 28.

Addressing Taxi/FHV Congestion

While many smaller taxi stands appear to be underutilized, TNCs have created a substantial new demand for curb space in Los Angeles. When appropriate curb space is unavailable, vehicles will conduct pick-ups and drop-offs in unauthorized locations (often double parking), which has worsened congestion throughout the city. To address this, the City might consider designating more pick-up/drop-off zones in areas where TNC activity is significant. TNCs could also be permitted to use existing taxi stands for the same purpose. Designating more pick-up/drop-off zones would likely mean reducing on-street parking (and losing the associated revenue) in some locations.

Vision Zero

The infrastructure provided for taxicabs has a significant influence on safety outcomes and Vision Zero goals. When safe locations are not established for taxi and TNC pick-up and drop-off, drivers will often use unauthorized ad-hoc locations instead. These ad-hoc pick-up and drop-off locations can be unsafe: they may involve blocking crosswalks, blocking bike lanes, blocking bus stops, blocking sight lines, or double parking. This can put vulnerable road users at risk in addition to making traffic conditions less reliable. At the same time, taxi and TNC drivers may have few other choices given the scarcity of approved locations. Creating more approved pick-up/drop-off locations will not change driver behavior overnight, but it may make a difference in the areas with the greatest issues.

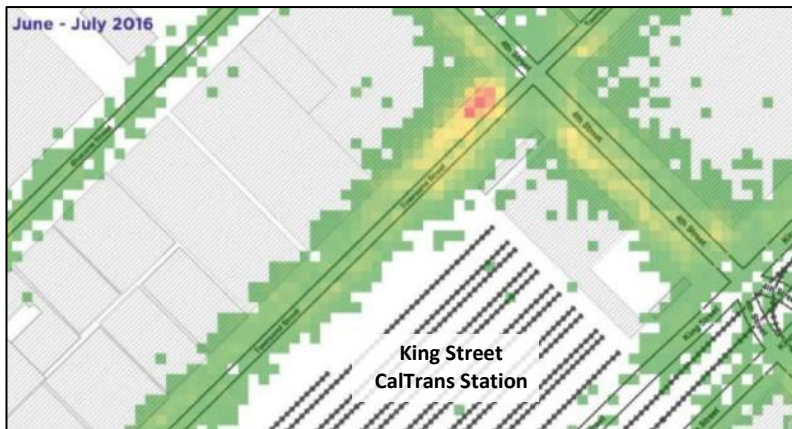
Curb Access as a Performance Incentive

The implementation of the Mobility Data Specification (MDS) for taxi/FHV providers will give LADOT the ability to enforce more targeted policies around curb access. It will also become possible to use curb access as an incentive in the incentive-based regulatory framework. LADOT can create designated pick-up/drop-off areas in congested areas to minimize double and illegal parking in these areas and companies that geofence to only allow pick up and drop off in these areas could document compliance through the provision of MDS data. This compliance could be incentivized through access to privileges in the incentive-based framework, such as access to off-street, publicly owned mobility hubs. A single corridor could be piloted as a start and to determine a methodology for wider deployment of the program.

Digital Curb Management

The City's 'Code the Curb' initiative is also an important step towards modernizing taxi and TNC infrastructure. This will lead to reduced confusion about curb use policies and allow travelers to digitally check what curb uses are allowed. Eventually, digital curb use policies could allow for more dynamic management of curb space. Permitted taxi/TNC zones (and perhaps associated pricing) could shift based on demand, travel patterns, or incentive programs. With the rollout of fully automated vehicles, a digital system of curb use policies will become essential to their operations, so Los Angeles is leading the way by digitizing its system today.

Figure 28: Example of hot spot analysis using TNC activity data.
Source: Rodriguez, J.F. "Mayor Lee strikes deal to allow Uber, Lyft vehicles to use SF curb space." 7 November 2017.



5.B Driver Employment Status

TNCs have previously claimed drivers as independent contractors, however this has been disputed. Recently, the state has sought to provide clarity with new legislation based on the recent court case, *Dynamex Operations West, Inc. v. Superior Court of Los Angeles* (2018). In its ruling on the case, the California Supreme Court established a presumption that a worker who performs services for a hirer is an employee for purposes of claims for wages and benefits arising under wage orders issued by the Industrial Welfare Commission.

A new bill currently in the legislative process, Assembly Bill 5 (AB5), expands on the case. The law would require a 3-part test, known as the “ABC” test, to establish that a worker is an independent contractor for the purposes of wages and benefits. To hire someone as an independent contractor, the company must show that the worker is a) free from the company’s control, b) providing services that aren’t central to the company’s business model, and c) runs an independent business. If any of the three conditions are not met, the worker would be classified as an employee. The bill passed the state assembly in May 2019 and now requires a vote by the state senate and the signature of Governor Gavin Newsom. The law would likely expand the categories of individuals eligible to receive benefits and require TNCs to treat drivers as employees.

5.C Driver Requirements

A significant reason for licensing taxicab drivers and companies is to protect the public. However, licensing requirements that are more burdensome than necessary to achieve that goal will tend to restrict the supply of services by limiting entry to the trade. Too restrictive an approach may also work against the public interest and may have safety implications.

California recently amended the taxicab transportation service law in the Government Code to move “taxicab permitting from the patchwork of various local requirements to require a permit in the jurisdiction where taxicab transportation services have the most substantial connection” which limits the number of localities in which a taxicab company would be required to obtain a permit. Up until December 31, 2018, every city or county was required to adopt an ordinance or resolution regulating taxicab transportation services. Now, that requirement applies to a city in which a taxicab company is “substantially located.” While local licensing authorities may impose operating requirements that are unrelated to permitting or business licensing, regulators should be mindful that any local regulation that conflicts with the state law regulating taxicab services may not be enforceable.

Driver Qualifications

The California Taxicab Transportation Service Law contains minimum requirements for licensing drivers across the state, including a mandatory controlled substance and alcohol testing certification program and a fingerprint-based criminal history check. (See section 3.10, Vehicle and Driver Permitting Functions, for more details on driving history and criminal background checks.)

Under the State law, a city must condition the issuance of a driver’s permit on the driver: (1) being employed or having an offer of employment as a taxi driver in the jurisdiction, and (2) passing a controlled substances and alcohol test. Driver’s permits are void upon termination of employment, and the employer must notify the city when a driver’s employment is terminated. These requirements are similar to Los Angeles’ current requirements for permitting taxicab drivers, which require all drivers be

sponsored by and authorized to drive for a particular taxicab organization to obtain a license from LADOT.

The California State Law as it is written should be adopted by Los Angeles. To the extent that the City may adopt additional qualifications as a condition of granting a license to a taxicab driver, the objective in doing so should be the safety of the public. Regarding the qualifications and experience of a taxicab driver, the following are best practices:

Medical Fitness

Generally, it is appropriate for professional drivers to have more stringent medical standards than those applicable to regular drivers. Medical fitness certification is important because professional drivers are on the road for longer hours and may have to assist disabled passengers and handle luggage. Currently, Los Angeles may require applicants to provide a medical report if they are afflicted with either a physical or mental incapacity that would preclude them from safely operating a taxicab.

Experience

Many local authorities rely on the standard driver's license as evidence of driving proficiency and do not require any additional tests or set a minimum age requirement. Jurisdictions that have minimum age requirements typically set it at 21 years. For example, taxi and for-hire vehicle drivers must be at least 21 years old in Portland, Oregon and King County (Seattle), Washington. The District of Columbia and California require TNC drivers to be 21 years old. Also, New York (outside New York City) requires TNC drivers to be at least 19 years of age. In Los Angeles, taxi drivers only need to be 18 years old and possess a current basic, Class C California Driver's License.

California state law requires TNC to drivers possess a valid driver's license issued by the State of California or, in the case of a nonresident active duty military member or a nonresident dependent of an active duty military member, a valid driver's license issued by the other state or territory of the United States in which the member or dependent is a resident. In addition, the CPUC requires TNC drivers to be at least 21 years old and have at least one year of driving history before providing TNC services.

Newly-licensed drivers present safety concerns. Allowing an 18 year-old driver who likely just received his or her license within a year to drive professionally would be the bare minimum. It also means that the driver is likely to have very limited driving history, if any. To align with the California TNC regulations, it is recommended that taxi drivers be at least 21 years old and have at least one year of driving history to be eligible to apply for taxi service.

Driver Training Requirements

Under the City's current regulations, taxicab operators are required to provide drivers with training regarding the safe and efficient use of all in-vehicle routing equipment and devices (street atlas and GPS, or other computerized mapping and routing programs).⁶³ In addition, the franchise ordinances further require that taxicab operators provide a training program that covers driver safety and defensive driving, behind-the-wheel driver training, and accessible vehicle operation training, and CPR certification for accessible vehicle drivers.

⁶³ Taxicab Rules §612.

The newly revised California state law requires that taxicab companies that are authorized to operate in a jurisdiction maintain (1) a safety education and training program in effect for all taxicab drivers, whether employees or contractors, and (2) an accessibility education and training program to instruct its taxicab drivers on compliance with the federal Americans with Disabilities Act and state disability rights laws, including making clear that it is illegal to decline to serve a person with a disability or who has a service animal.⁶⁴

With the advent of TNC services, the approach to training for-hire drivers is changing. There is a gap in the training and education requirements for individuals who drive for TNC services and the requirements for the traditional taxi driver. As a result, many jurisdictions face the challenging prospect of altering their driver training programs in an attempt to keep the playing field level between the two driver classes, while not sacrificing aspects of the training necessary to protect the safety of the riding public and the quality of the service being offered. Some cities have made their general curriculum less of a bar to entry for new drivers, while others have eliminated their programs all together, with varied success. Additionally, some TNC services, such as SilverRide provide door-through-door services by driver companions that offer drivers a variety of short mobile video training for transporting people with physical and cognitive special needs. Los Angeles could consider licensing the training technologies of SilverRide or another vendor to provide additional training for riders with special needs. A review of jurisdictional summaries regarding driver safety and training reveal a number of trends regarding how the approach to training taxi drivers is changing, and the issues and subjects of concern to regulatory agencies.

In 2016, the City of Toronto eliminated its 17-day taxi driver training program in an attempt to make driving a taxi more attractive and balance the licensing requirements for taxi drivers with individuals who drive for TNCs.⁶⁵ In the three months immediately following the end of the driver training program, more than 3,500 people obtained new taxi driver licenses.⁶⁶ However, many of the new drivers were unequipped to competently provide taxi service, exhibited poor knowledge of the City, possessed limited driving experience, and suffered from a protracted language barrier. As a result, the local taxi companies in Toronto made driver training programs mandatory through courses at a local college.⁶⁷

While the general trend is toward less training, there is one trend in the opposite direction: many jurisdictions have either created or expanded education programs to teach drivers how to meet the needs of persons with disabilities. Even in Toronto—where all other driver training has been eliminated—training is still mandatory for those drivers who wish to operate an accessible for-hire vehicle.⁶⁸

⁶⁴ Cal. Gov't Code § 53075.5(h).

⁶⁵ See City of Toronto, By-Law No. 575-2016.

⁶⁶ See Betsy Powell, Toronto taxi industry resurrects driver training after city eliminated it, THE STAR, Aug. 24, 2016, https://www.thestar.com/news/city_hall/2016/08/24/toronto-taxi-industry-resurrects-driver-training-after-city-eliminated-it.html.

⁶⁷ The "Taxi 101" course at Centennial College is a 25-hour program that teaches drivers "about customer service, sensitivity training, the layout of the Greater Toronto Area, technology on the taxi and in car defensive training." See Centennial College, Course Catalog, <https://db2.centennialcollege.ca/ce/coursedetail.php?CourseCode=TAXI-100> (last visited Feb. 22, 2019).

⁶⁸ See City of Toronto Municipal Code, Chapter 545, Article 5.

Eliminating driver training programs may stimulate growth and interest in the taxi driving profession (increasing availability to the public). Overly-cumbersome training programs can negatively impact interest in becoming a driver and serve as a barrier to entry, while the existence of a training program that is implemented in a reasonable manner can be beneficial to both the driver and the riding public. The best answer is likely found between the two positions.

Automated Vehicles

As automated vehicles come online, technology will eventually provide safe and well working vehicles. But what happens if something goes wrong while a passenger is inside the vehicle? Today's drivers (unless specifically affiliated with an AV project) have not been taught how to deal with the potential problems that may occur with automated technology while they are in the vehicle, such as unexpected breaking, runaway acceleration, or incorrect steering. Driver training and readiness will have to become an important component to automated regulation. Courses on limitation and abilities of automated technologies, failure simulations, and in-person driving sessions should be provided.

In Portland, Oregon, the Portland Bureau of Transportation ("PBOT") has begun regulating automated vehicles.⁶⁹ The PBOT has created licensing and performance standards for companies engaging in AV activities, as well as for AV operators. Within four months of a driver's certification, AV operators must successfully complete tests on map-reading and the relevant city code provisions and administrative rules. Additionally, drivers and operators must successfully complete a City-approved driver safety training program within four months of certification of the driver's permit.

In California, the Department of Motor Vehicles requires applicants for permits for post-testing deployment of automated vehicles on public roads to submit a "consumer or end user education plan," that includes an explanation of the educational materials that will be provided to end users and must explain how end users will receive education after purchasing a previously-owned vehicle.⁷⁰ After securing such a permit to put semi-automated vehicles on the roads in California, Uber created a nearly 70-hour program⁷¹ for all potential self-driving car operators. The program requires that new operators "shadow" experienced operators on both closed courses and public road activities. Operators attend a five-day training program where they are expected to complete about 33.5 hours of in-vehicle instruction on a closed course, and 7.5 hours of in-classroom instruction. Operators are put into test error scenarios on a closed course and attend instructional sessions to learn about the behavior of the vehicles and the course. They then accrue practice time dealing with the error scenarios. After successfully completing this round, operators then accumulate another 35 hours of in-vehicle training on public roads. Trainee operators ride along with experienced operators and operate their own vehicles with experienced co-pilots.

⁶⁹ See Portland Bureau of Transportation, Autonomous Vehicle Permit Application, <https://www.portlandoregon.gov/transportation/article/643710>.

⁷⁰ Cal. Code Regs. title 13, § 228.06 (Lexis Advance through Register 2019, No. 5, February 1, 2019).

⁷¹ <https://jalopnik.com/here-s-the-training-program-uber-gives-to-self-driving-1793713137>

Training Recommendations

Los Angeles could shift all training and testing responsibilities to taxi companies, including allowing them to decide what their drivers need to know to meet the economic realities of the current for-hire industry. It is recommended that drivers who intend to drive wheelchair accessible vehicles be required to complete a course that covers the fundamentals of wheelchair operation as well as basic accessible vehicle features, types of accessible vehicles, and techniques to handle loading and transferring persons with disabilities as well as different types of wheelchairs. An exam should be required at the conclusion of the course to demonstrate a level of proficiency. Accessibility training is an integral part of driver training programs across the U.S. and globally, including those jurisdictions that have otherwise eliminated driver training requirements. It is further recommended

Taxi Company Permitting & Qualifications

Under the new California state law, Government Code § 53075.5, all licensing jurisdictions must require taxicab companies that are authorized to operate in a jurisdiction to do the following:

- Maintain reasonable financial responsibility to conduct taxicab transportation services;
- Provide for a taxicab driver fingerprint-based criminal history check;
- Participate in the pull-notice program pursuant to Section 1808.1 of the Vehicle Code to regularly check the driving records of all taxicab drivers, whether employees or contractors;
- Maintain a drug and alcohol testing program;
- Maintain a safety education and training program in effect for all taxicab drivers, whether employees or contractors;
- Maintain an accessibility education and training program to instruct its taxicab drivers on compliance with the federal Americans with Disabilities Act of 1990 and state disability rights laws;
- Maintain its motor vehicles used in taxicab transportation services in a safe operating condition, and in compliance with the Vehicle Code, subject to annual inspection by the city or county in which it is substantially located, at a facility that is certified by the National Institute for Automotive Service Excellence or a facility registered with the Bureau of Automotive Repair; and
- Provide an address of an office or terminal where documents showing compliance with these requirements may be inspected by the permitting city or county.

At a minimum, LADOT will need to ensure that taxi companies have the ability to undertake the above responsibilities and minimum requirements prior to licensing.

In addition, the Taxicab Transportation Service Law, § 53075.51, provides that any city or county, regardless of whether a taxicab company is substantially located within its jurisdiction, “may adopt, by ordinance, operating requirements for taxicab companies and taxicab drivers that do not relate to permitting or business licensing,” including, but not limited to:

- Limits on the number of taxicab companies that may use taxi stand areas or pickup street hails within the jurisdiction;
- Requirements to provide services in a manner that provides equal accessibility for all populations within the jurisdictional boundaries of the city or county; and

- Other public health, safety, or welfare ordinances relating to taxicabs.

However, the State law explicitly states that a taxi company's compliance with any operating requirements cannot "be a condition for issuance of a permit."

The California State Law as it is written should be adopted by Los Angeles. To the extent that the City may adopt additional qualifications as a condition of granting a license to a taxicab company to operate, the objective in doing so should be the safety of the public, who will be using operators' vehicles and drivers. We make the following recommendations regarding the qualifications and experience of a taxicab company:

Financial Security

California state law requires taxi companies – including individual owner-operators – to demonstrate financial security to operate a taxicab transportation business. Financial disclosures and references covering the applicant's financial history and status are the primary means by which regulators determine the financial fitness of taxi and for-hire vehicle companies. For example, in New York City, the financial disclosures help the Taxi and Limousine Commission ("TLC") ensure the financial safety of the applicant both individually and as a business. New York City also requires full financial disclosure of an applicant for a taxicab license. Where the applicant already owns one or more medallions, the applicant must provide a financial disclosure statement that includes all assets, liabilities, income, and net worth of all business entity persons of a business entity applicant. However, the value of such detailed disclosures for protecting the public is questionable and may be overly burdensome.

Experience

Requiring the company to have particular experience in terms of years of operation providing taxicab transportation service would limit new operators from starting a business and entering the market. Restrictions on market entry restrict competition and hinder innovation. Company experience is not a recommended criterion for licensure.

Criminal Record and Background Check Recommendations

Each applicant for a taxi company permit should provide a valid government-issued photo ID and a valid social security number for the company's principal officers. For foreign applicants, a local licensing authority may want to require a certificate of good conduct from the relevant embassy. Basic background checks of the company's principal officers should include a disclosure of convictions. In New York City, each individual, or person acting on behalf of a business entity applying for a taxicab license must be fingerprinted for the purpose of investigating good moral character. In Arizona, taxi companies must be in good standing with the regulator/jurisdiction (*e.g.*, no outstanding civil penalties) prior to permitting.

Insurance Coverage Levels Recommendations

The amount and type of coverage that vehicle owners and drivers carry must be high enough to protect persons and property injured or damaged in an accident. If the vehicle's insurance does not cover damages caused to people or property in an accident, then the vehicle owner and/or driver may be liable for the additional costs. When a vehicle is used to transport passengers for hire, it adds exposure and creates a different type of insurance risk than when a vehicle is used as personal passenger vehicle.

Standard personal motor vehicle insurance policies contain provisions exempting the insurer from liability, or terminating the policy, if the insured vehicle is used for the carrying of passengers for hire or compensation. The livery exclusion applies to liability insurance, personal injury protection coverage in no-fault states, comprehensive coverage and collision, and uninsured motorist (UM/UIM). Livery exclusions were included in these policies because transporting passengers for hire adds exposure and creates more risk than the insurance company contemplated for a personal passenger vehicle, including additional miles and longer hours driven, unfamiliar roads, random and unscheduled pickup locations, and more people in the vehicle (i.e., more potential injuries).

To account for the heightened risk, taxi and limousine regulators have required vehicles to have commercial insurance in effect at all times to protect passengers, drivers, and third parties (pedestrians or other drivers) in the event of a collision. While required insurance coverage for taxis varies substantially by state and jurisdiction, commercial insurance is the only appropriate type of insurance coverage for taxicabs and other for-hire transportation services.

In an already declining market, the cost of increasing the minimum levels of coverage could be detrimental to the taxi industry. The benefit of increased levels of coverage is ensuring that innocent victims of motor vehicle accidents are compensated for the injury and financial loss resulting from a taxi accident and that taxi drivers and vehicle owners will not be liable for costs in excess of what insurance covers. However, when coverage levels increase, so do the costs to maintain the insurance.

As set forth in Table 8, the minimum insurance coverage for taxis is exponentially higher than the minimum insurance requirements for private passenger vehicles, which requires drivers have at least \$30,000 coverage for all persons injured in an accident, subject to a limit of \$15,000 per person, and at least \$5,000 coverage for property damage. It should be noted that for taxi subcontracted Access trips that serve elderly and/or disabled seniors through a program managed by L.A. Metro, the minimum insurance coverage is \$1,000,000 per incident.

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⁷² Cal. Veh. Code § 16500: Every owner of a vehicle used in the transportation of passengers for hire, including taxicabs, when the operation of the vehicle is not subject to regulation by the Public Utilities Commission, shall maintain, whenever he or she may be engaged in conducting those operations, proof of financial responsibility resulting from the ownership or operation of the vehicle and arising by reason of personal injury to, or death of, any one person, of at least fifteen thousand dollars (\$15,000), and, subject to the limit of fifteen thousand dollars (\$15,000) for each person injured or killed, of at least thirty thousand dollars (\$30,000) for the injury to, or the death of, two or more persons in any one accident, and for damages to property of at least five thousand dollars (\$5,000) resulting from any one accident.

TNC Insurance in California

The [California Public Utility Code](#) contains the insurance requirements for vehicles providing services for TNCs in California. TNCs are required to maintain commercial liability insurance policies providing not less than \$1,000,000 per-incident coverage for incidents involving vehicles and drivers while they are providing TNC services and a minimum of \$100,000 commercial insurance for all other times that the driver is “logged-on” to the app but has not accepted a trip request. The insurance coverage must be available to cover claims regardless of whether a TNC driver maintains insurance adequate to cover any portion of the claim. In addition, TNC drivers are required to provide proof of both their personal insurance and the TNC’s commercial insurance in the case of an accident.

TNC insurance is divided into three periods:

- **App Off:** TNCs do not provide any insurance coverage when the app is off. Drivers are covered by their personal insurance.
- **Period 1:** Driver is logged onto the app but has not accepted a ride request. TNCs typically provide contingent liability coverage when the driver’s personal insurance does not provide coverage.
- **Period 2:** Driver has accepted a ride request and is going to pick up the passenger, but there are no passengers in the vehicle. TNCs typically provide primary commercial liability, uninsured/underinsured motorist, contingent collision, and comprehensive coverages.
- **Period 3:** The Driver has a passenger in vehicle. TNCs typically provide primary commercial liability, uninsured/underinsured motorist, and contingent collision and comprehensive.

During Period 1, TNCs must provide primary insurance in the amount of at least \$50,000 for death and personal injury per person, \$100,000 for death and personal injury per incident, and \$30,000 for property damage. This requirement may be satisfied by: (a) TNC insurance maintained by the driver; (b) TNC insurance maintained by the TNC that provides coverage if a driver does not maintain the required TNC insurance, or if the driver’s TNC insurance ceases to exist or is cancelled; or (c) a combination of (a) and (b). In practice, TNCs generally obtain the full policy. TNCs must maintain insurance coverage that provides excess coverage insuring the TNC and the driver in the amount of at least \$200,000 per occurrence to cover any liability arising from a participating driver using a vehicle in connection with a TNC’s online-enabled application or platform.

During periods 2 and 3, TNCs must provide primary commercial insurance in the amount of \$1,000,000 for death, personal injury, and property damage. In addition, during Period 3, the TNC’s insurance coverage must provide for uninsured motorist coverage and underinsured motorist coverage in the amount of \$1,000,000.

Insurance Recommendations

Commercial insurance is currently the only appropriate type of insurance coverage for taxicabs and other for-hire transportation services while they are engaged in commercial, for-hire activity. The TNC insurance model was a compromise between the insurance industry and TNCs. When TNCs first entered the market, they were not subject to the same insurance and licensing requirements as they are now. This created risks for passengers, drivers, and the public in general. One of the biggest risks was a coverage gap. These coverage gaps existed because TNC drivers used their personal cars for commercial activity but did not have commercial coverage, and TNCs relied on a combination of the driver's personal auto insurance and the TNC's commercial insurance. This combination did not provide sufficient coverage during all TNC activities. Amid concerns, state insurance commissioners issued warnings, then primary insurers offered new products, and 49 states and the District of Columbia [changed their laws to require commercial insurance levels similar to taxis and limousines](#).¹

The TNC insurance model may make sense for certain taxi service business models. It is possible that vehicles that are used to provide taxi service could have a commercial insurance policy that applies only while engaged in conducting those operations – and a personal motor vehicle policy for all other times when the vehicle is not being used for commercial purposes. Flexible insurance requirements could encourage innovation and competition in an open taxi market while still protecting the public interest. Any such insurance products would need to be approved by the state and ensure there are no insurance gaps.

In an already declining market, the cost of increasing the minimum levels of coverage could be detrimental to the taxi industry. Though the benefit would be increased payouts for those impacted in a crash, the cost to maintain the insurance could be too great.

Regardless of the type and level of insurance coverage that is required, taxicab vehicle owners must be required to submit proof of adequate insurance to LADOT as a condition of licensing. LADOT would monitor each insurance policy and issue summonses and/or directives when an owner fails to maintain the necessary insurance coverage. Through internal computer systems and e-mail, the Department could monitor taxi vehicle insurance policies.

Acceptance of Taxicab Company and Driver Permits from Other Jurisdictions

As is explained in more detail in the Reciprocity section of this report, since January 1, 2019, Government Code § 53075.5 has allowed cities and counties to accept a "taxicab company or driver permit issued by another city or county as valid, and may issue to that taxicab company an inspection sticker or photo permit that authorizes that taxicab company or driver to operate within the county." In addition, the law provides that a taxicab company permitted by a city or county may provide prearranged trips anywhere within that county. The City will be able to regulate the operations of any taxis operating within the city limits, as long as the regulations are not related to permitting or business licensing.

Vehicle and Driver Permitting Functions

Driving History and Criminal Background Checks

The new California state law sets out the requirements for conducting driving history and criminal background checks. Under the law, taxicab companies must provide for a driver fingerprint-based criminal history check and participate in the pull-notice program under Section 1808.1 of the California Vehicle Code to regularly check the driving records of all taxicab drivers, whether they are employees or contractors.

The Pull-Notice Program administered by the California Department of Motor Vehicles (DMV) is a process to provide an employer with a report of the driver's current public DMV record, as well as timely notice when any of the following are added to a driver's DMV driving record:

- Any subsequent convictions;
- Failures to appear;
- Accidents;
- Driver's license suspensions;
- Driver's license revocations; and
- Any other actions taken against the driving privilege.

As part of the Pull-Notice Program, every 12 months the DMV will send the employer a report to verify that each employee's driver's license has not been suspended or revoked, the employee's traffic violation point count, and whether the employee has been convicted of a violation of certain offenses involving alcohol and drugs. Employers are required, by law, to present the DMV reports upon request to an authorized representative of the licensing agency. State law also requires TNCs to participate in the DMV Pull-Notice Program to regularly check the driving records of a participating driver regardless of whether the participating driver is an employee or an independent contractor of the company.

State law requirements for driving history and criminal record checks for taxi drivers are mostly in line with the requirements for TNC drivers with a few exceptions. First, TNC drivers are not subject to fingerprint-based background checks. Second, the state law does not include criteria for excluding drivers from working as a taxicab driver in the same manner as it does for TNCs. In California, TNCs are required to complete national criminal background checks of all prospective drivers and must exclude any drivers who have been convicted within the past seven years of driving under the influence of drugs or alcohol, fraud, sexual offenses, use of a motor vehicle to commit a felony, a crime involving property damage and/or theft, acts of violence, or acts of terror. TNC drivers with convictions for reckless driving, driving under the influence, hit and run, or driving with a suspended or revoked license are also excluded, as are those with more than three points on their driving records for lesser offenses.

Currently, LADOT fingerprints all taxi driver-applicants for the purpose of conducting a criminal record check. The Department will deny an application if the applicant/driver is required to register as a sex offender or has ever been convicted of a felony involving any type of sexual offense, the sale/distribution of illegal drugs or controlled substances, acts of violence, kidnapping, fraud, a crime involving theft, possession of a firearm/dangerous weapon, resisting or obstructing a police officer or EMT, or use of a motor vehicle to commit a felony. Applicants will also be denied a permit if they have been convicted within the prior seven years of any sexual offense; any offense related to use, sale, possession of controlled substances or addictive or dangerous drugs; acts of violence, involving moral turpitude; a crime involving theft, the possession of a firearm or dangerous weapon; solicitation or

engagement in prostitution; or resisting, delaying, or obstructing a peace officer, public officer or emergency medical technician; or of any offense which results in a felony conviction. Drivers with convictions for a hit and run, driving under the influence, reckless driving, or more than three moving violations within the prior three years will also be denied a permit.

To the extent that state law allows, Los Angeles should adopt a uniform, clear policy for the consideration of criminal records and include criteria for excluding applicants for driver's permits from working in the taxicab profession. To achieve consistency between taxis and TNCs, it is recommended that such criteria align with the state's regulations for TNC drivers.

Controlled Substance & Alcohol Testing

The new California state law requires each city or county that adopts an ordinance regulating taxicab service to include a mandatory controlled substance and alcohol testing certification program in that ordinance. The program must require that taxicab drivers pass a drug and alcohol test before receiving a permit and then annually thereafter. By law, the local ordinance must also include the following requirements:

- Drivers must show a valid California driver's license at the time and place of testing;
- Procedures and requirements for rehabilitation and for return-to-duty and follow-up testing and other requirements will be substantial as in Part 382 (commencing with Section 382.101) of Title 49 of the Code of Federal Regulations;
- A test in one jurisdiction must be accepted as meeting the same requirement in any other jurisdiction;
- The results of the test must be reported directly to the employing transportation operator, who may be required to notify the city or county of positive results;
- In the case of a self-employed independent driver, the test results must be reported directly to the city or county; and
- All test results are confidential and shall not be released without the consent of the driver, except as authorized or required by law.

State law further requires that taxicab companies that are authorized to operate in a jurisdiction provide a drug and alcohol testing program that complies with the above requirements and that the companies pay all associated costs for their employees, except that an operator may require employees who "test positive" to pay the costs of rehabilitation and of return-to-duty and follow-up testing. Self-employed independent drivers are responsible for compliance with—and any costs of—the drug and alcohol testing program for themselves.

The state law requirements are similar to what Los Angeles currently has in place. Under the current Los Angeles regulations, drivers must be enrolled in a drug and alcohol testing program at all times (administered through their sponsored taxicab operator), and must provide an initial controlled substance test report for new permits. Taxicab operators are responsible for pre-employment, annual, and random drug and alcohol testing of its drivers. Operators are also required to provide substance abuse training to supervisors to determine whether reasonable suspicion exists to submit a driver to additional testing.

In California, TNCs are required to institute a zero-tolerance intoxicating substance policy with respect to drivers that includes the following:

- The TNC must include on its website, mobile application and riders' receipts, notice/information on the TNC's zero-tolerance policy and the methods to report a driver whom the rider reasonably suspects was under the influence of drugs or alcohol during the course of the ride;
- The website and mobile application must include a phone number or in-app call function and email address to report the zero-tolerance complaint;
- Promptly after a zero-tolerance complaint is filed, the TNC shall suspend the driver for further investigation; and
- The website and mobile application must also include the phone number and email address of the CPUC's Passenger Section.

The licensing jurisdiction's role in drug and alcohol testing is to provide a list of the consortia certified under Part 382 of Title 49 of the Code of Federal Regulations that offer tests in or near the jurisdiction. It is recommended that Los Angeles adopt the state law requirements mandatory for controlled substance and alcohol testing.

Suspension & Revocation

Public safety depends upon licensing authorities having a mechanism in place to remove unsafe or unfit drivers from providing taxi service. Currently, any LADOT-licensed taxi driver who violates a taxicab rule established by the Taxicab Board or LAWA (Los Angeles World Airports, the governing body for LAX and Van Nuys Airports), any provision of a taxicab franchise or operating permit, or any provision of the Los Angeles Municipal Code or the Los Angeles Administrative Code, may have their Drivers' Permit suspended or revoked. The driver may pay a monetary penalty in lieu of the suspension. All summonses that may result in a suspension or revocation must be issued by an LADOT Investigator. Drivers have the opportunity to be represented by a lawyer if they choose. The hearings are conducted by LADOT, which will review the driver's history after the hearing and a decision on licensure resulting from the hearing.

5.D Fleet/Vehicle Requirements

Trade Dress

Street hails and walk-ups at taxi stands present unique safety challenges. Visual safety features allow passengers to easily identify licensed taxis on the street or at cab stands. By looking at the color scheme, dome lights, and other required taxi features as simply a means to an end, it is possible to innovate new ways to achieve the same—or even higher—levels of safety.

In Los Angeles, LADOT-licensed taxis are identifiable on the street because they bear an official City of Los Angeles Taxicab Seal.¹⁰ Taxicabs bearing this seal are insured, have trained drivers, and are regularly inspected by the City of Los Angeles. In addition, Los Angeles regulations require licensed taxis to have a top light, LADOT-approved color scheme along with the taxicab operator's name and phone number on both sides of the vehicle, and the taxicab fleet vehicle number on both sides and the rear of the taxicab.¹¹

Some jurisdictions require all taxis to be painted the same specific color. Examples include New York City's yellow cabs and the District of Columbia's bright red cabs. The primary purpose of the color scheme is to allow passengers to easily and quickly distinguish a licensed taxi from an unlicensed/illegal/bandit cab. Like Los Angeles, many jurisdictions allow cab companies to choose their own color scheme. For example, in Seattle, taxis must be painted one, solid color and have signage that

includes the words “taxi,” “cab,” or “taxicab,” and taxis owned or represented by an association must use the same color scheme, which must be approved by the taxi regulator.¹²

Requiring all cabs to be painted the same color may be unnecessarily restrictive on the industry. Safety and aesthetics do not have to be mutually-exclusive. There are other ways to accomplish that goal, such as consistent and clearly visible trade dress and regulator-issued markings. LADOT could relax the color requirements to allow a vehicle that meets safety standards to be painted any color while maintaining the other required features of a taxicab. This could make the service more attractive to innovative business models. The color scheme requirement could also be flexible. For example, in the District of Columbia, the Department of For-Hire Vehicles may “allow or require enhancements to or modifications of the uniform color scheme for a vehicle that participates in a pilot, grant, donation agreement, or other program, or that is equipped with a digital taxi solution.”¹³

Fleet Age and Life Cycle

Setting a limit beyond which a local authority will not license vehicles is somewhat arbitrary since it is possible for a well-maintained older vehicle to be in a safe operating condition. An increased frequency of inspections may, however, be appropriate for older vehicles or vehicles with higher mileage. For example, there may be twice-yearly tests for vehicles that are more than five years old.

Under the existing Los Angeles Taxicab Rules, vehicles may not exceed five model years of age – with only some exceptions. Vehicles placed into service before January 1, 2011, and any Level 2-rated Green Taxi may be in service for nine years if, after the fifth model year, the vehicle passes twice-yearly inspections by a mechanic or garage approved by the Department and not affiliated with the taxicab operator. The following vehicles may be in service to the 10th anniversary of the model year provided the vehicle is inspected six months before or after the end of the ninth year:

- A wheelchair accessible vehicle
- Compressed Natural Gas fueled vehicle placed into taxicab service prior to 2011
- Large capacity vehicle maintaining passenger seating capacity of six or more
- Level 3 or Level 4 rated Green Taxi
- Any other taxicab placed into taxicab service in calendar year 2011 or later

In New York City, a taxicab must be either new (having less than 500 miles on the odometer) or less than seven years old if it passes inspection. The vehicle is allowed to stay in service as long as it passes inspection (required every four months) and has not met its scheduled retirement date. Retirement rules barring some exceptions are as follows:

“New Vehicles. All vehicles Hacked-up as new vehicles pursuant to TLC rule 67- 06(b)(1) must be retired from Taxicab service and replaced no later than the first scheduled inspection of the vehicle occurring 84 months after the vehicle was Hacked-up.

Used Vehicles. All vehicles Hacked-up as used vehicles pursuant to TLC rule 67- 06(b)(2) must be retired from Taxicab service and replaced no later than the first scheduled inspection of the vehicle occurring 84 months after the vehicle was Hacked-up, less the age of the vehicle as determined by the difference between the calendar year at Hack-up and the model year of the vehicle. For example, a used 2015 model year vehicle that was hacked up in 2018 is three years old and must be retired from Taxicab service and

replaced no later than the first scheduled inspection of the vehicle occurring 48 months after the vehicle was Hacked-up.”

Furthermore, New York City automatically grants a one-year extension of time for any vehicle “dedicated to operating on compressed natural gas (with a maximum reserve gas tank of five gallons) within six months after Hack-up.”

Vehicle Air Quality Standards

There are a variety of methods for setting for-hire vehicle emissions standards. In some cases jurisdictions impose a maximum fleet age (noted above). For example, the City of London has a maximum 15-year age limit for taxis. A current proposal would reduce the maximum vehicle age to 12-years. Other jurisdictions may also have GHG and other standards to regulate EPA criteria pollutants. Other jurisdictions have established incentive programs and mandates for electric and zero emission vehicles (ZEVs).

Electric and Zero Emission Vehicles (ZEVs)

Findings have shown that electric taxis have had similar or low cost of ownership to traditional taxis and slightly higher profitability than conventional taxis in some areas. Maintenance costs for electric vehicles are generally estimated to be lower (up to 35%) than the costs to maintain a gasoline vehicle. In fact, higher mileage, such as with for-hire vehicles, improves the economics of EV charging. In addition, the lack of noise makes electric cars an ideal option for urban centers like Los Angeles, where you can be in a residential neighborhood but still hear the cars passing by on the local highways. The low noise and reduced environmental impact make electric vehicles an extremely viable option for the future of the taxi industry. Stockholm, Amsterdam, Oslo, and Dubai are experimenting with electric fleets. In Dubai, a fleet of 50 Tesla taxis completed 64,186 trips and traveled over 2.1 million km in the 6 months after the fleet was put into operation in September 2017, saving ~60,000 gallons of fuel.

Inspections

Under the new California state law, taxicab companies that are authorized to operate in a jurisdiction must “maintain [their] motor vehicles used in taxicab transportation services in a safe operating condition, and in compliance with the Vehicle Code, subject to annual inspection by the city or county in which it is substantially located, at a facility that is certified by the National Institute for Automotive Service Excellence or a facility registered with the Bureau of Automotive Repair.”¹⁴

The following are best practices regarding vehicle inspection frequency, criteria, inspector qualifications, and inspection facilities.

Frequency of Tests

The legal requirement for taxis requires that they should be subject to a Department of Motor Vehicles (DMV) test or its equivalent one year after first registration and annually thereafter. Regulators generally inspect taxis and for-hire vehicles at first licensing and annually or more frequently thereafter. This approach is considered best practice in the interests of public safety and customer protection. Annual testing for licensed vehicles regardless of age is considered best practice in cases where a vehicle is driven for incidental or part-time service; however, vehicles that are driven frequently

should be subject to inspection based on their accumulated mileage. More frequent testing is appropriate for older vehicles or vehicles with higher mileage.

Annual inspection requirements are common for taxicabs and other for-hire passenger vehicles, including those used to transport passengers for TNCs. The District of Columbia and San Francisco require taxis be inspected on an annual basis.¹⁵ New York City requires triannual inspections of all taxis and for-hire vehicles, including TNCs.¹⁶ The CPUC requires TNC vehicles to be inspected before the vehicle is first introduced into service as a TCP or TNC vehicle; and then every 12 months or 50,000 miles thereafter, whichever occurs first.¹⁷ TNCs are responsible for ensuring that each of their vehicles/drivers' vehicles complies with this requirement and must maintain records of such compliance for a period of three years.¹⁸

In Los Angeles, under Taxicab Rule 444, taxis must be inspected when first placed into service as a taxicab and then annually by the L.A. Department of Transportation.¹⁹ In addition, the Department may require an additional physical inspection, mechanical inspection, or emissions test for any unusual engine/vehicle issues and/or tailpipe emissions as noted for any Department inspection. Operators are required to keep up-to-date all inspection, preventative maintenance, and maintenance repair records for each taxicab and to make these records available upon request.²⁰

Criteria for Tests

For mechanical matters, it is appropriate to apply – at a minimum – the same criteria as those for the DMV test to taxis and other for-hire vehicles.

Taxis and private hire cars provide a service to the public, so it is also appropriate to set criteria for the internal condition of the vehicle, requiring for example the internal passenger accommodation, upholstery, and fittings to be maintained in a serviceable condition.

The CPUC requires vehicles used as TNCs to undergo a 19-point inspection by a facility licensed by the California Bureau of Automotive Repair:²¹

1. Foot brakes
2. Emergency brakes
3. Steering mechanism
4. Windshield
5. Rear window and other glass
6. Windshield wipers
7. Headlights
8. Tail lights
9. Turn indicator lights
10. Brake lights
11. Front seat adjustment mechanism
12. Doors (open, close, lock)
13. Horn
14. Speedometer
15. Bumpers
16. Muffler and exhaust system
17. Condition of tires

- 18. Interior and exterior rear-view mirrors
- 19. Safety belts for driver and passenger(s)

The inspection criteria listed above are common for TNCs and taxis²² and are in line with the existing taxi inspection criteria in Los Angeles. In Los Angeles, the annual Department inspection for taxicabs covers at least 34 physical and mechanical items, including paint, tires, brakes, lights, signals, interior condition, vehicle equipment, safety equipment, registration, taximeter, communication equipment, and signs.²³

Table 9: Taxicab Vehicle Inspection Items by DOT—Initial and Annual Inspection Criteria

General Vehicle Inspection Items	Rule/Reference
1. Vehicle Color Scheme & Identification	LAMC 71.16 & 71.20; Rule 422, 423
2. Unightly Paint Defacement or Body Dents	437
3. Tires _____ Hubcaps _____	440, 454
4. Glass _____ Mirrors _____ Windows _____	434, 435
5. Lamps: Head _____ Tail _____ Stop _____	434, 454
6. Lamps: Directional _____ Flasher _____	434, 454
7. Dome/Top Light	403, 454
8. Back-up Lights	434, 454
9. Robbery Light	416, 454
10. License Plate Lamp	434, 454
11. Odometer	n/a
12. DMV Registration	Ordinance 4.3.c
13. Meter Number:	402, 420, 461
14. Weights & Measures Certificate	402
15. Radio (two-way)	404
16. Wipers _____ A/C _____ Htr _____ Defrost _____ Horn _____	454
17. Steering Mechanism	454
18. Check Engine Light	460
19. Safety Shield _____ Camera _____ Camera Signs _____	407
20. Exhaust System & Emission Status	401
21. Brakes: Service _____ Emergency _____	454
22. Trunk Unlock Device	417
23. Seats _____ Upholstery _____ Projections _____	433, 436, 438
24. Seatbelts _____ Door Locks _____	435, 441, 442
25. Floor Covering _____ Head Liner _____	433, 436
26. I. D. Card Holder	418
27. Lettering: Size _____ Sign Locations _____	
28. Rate Postings (w/ \$5 change, all ride for price of one, credit cards accepted, driver provides printed receipt)	405, 410, 413, 459, 462
29. \$5.00 Change Sign (vehicle ext & rate sign)	411
30. All Passengers Ride for Price of One Sign (veh ext & rate sign)	413
31. Braille Sign	455
32. Customer Service/Comment Sign	458
33. Other Req'd Signs	439, 459, 462
34. Wheelchair Securement Straps	401.d

Third Party Inspections

Under the new California state law, annual taxicab inspections must be performed at a facility that is certified by the National Institute for Automotive Service Excellence or a facility registered with the California Bureau of Automotive Repair.²⁵ The Bureau of Automotive Repairs performs licensing for automotive repair dealers, smog check stations, brake and/or lamp stations, smog check inspectors and/or smog check repair technicians, and brake and/or lamp adjusters,²⁶ while Automotive Service Excellence Certification provides comprehensive auto mechanic certification in the areas of Parts Specialist and Service Consultant.²⁷

Requiring the inspection be performed by a licensed facility that is not affiliated with the taxicab operator would reduce the risk of operators performing less rigorous and comprehensive inspections to save time and reduce expenses. According to the CPUC, requiring inspections to be performed by

licensed third-party facilities reduces the chance that an unfit vehicle will pass inspection, thereby enhancing public safety.²⁸

Recommendations

A necessary step in executing any plan for electric vehicles would be to analyze the City of Los Angeles and the amount of charging stations currently in place. Los Angeles, unlike many other cities throughout the country, is leading the way in electric charging stations making this an extremely viable option for taxicabs in the area. Los Angeles currently has 1,818 charging stations and has been listed in the top 10 “EV-friendly cities in the US.”

Of the 1,818 charging stations in Los Angeles, 1,287 are described as public charging stations (Level 2 and Level 3), and 95% of the ports are level 2 charging ports. However, only 7% are fast chargers and only 9% offer free charges. In addition to availability of charging ports, charging time is also a factor. It can take up to 12 hours to fully-charge an electric vehicle battery, depending on the size of the battery and the speed of the charging port.

In 2018, Governor Newsom signed Senate Bill 1014 into law, establishing the California Clean Miles Standard and Incentive Program. The program requires the following:

- By 2021: The State Air Resources Board establish a baseline for greenhouse gas emissions by TNCs
- By 2021: The State Air Resources Board establish annual reduction targets for TNCs
- By 2022: Each TNC develop reduction plans to meet the aforementioned targets. It also requires this be repeated every 2 years thereafter.

To ensure an even playing field, LADOT should mandate the same greenhouse gas reduction schedule for taxis and microtransit. This simplifies local regulations for all for-hire drivers and brings City law into line with State law. In conjunction with this schedule, LADOT can implement a network of charging hubs, as described in the incentive-based framework, to alleviate range and charging concerns for TNCs and taxis.

To further speed opportunities to learning, LADOT should also explore collaboration opportunities with [Atlas Public Policy](#), which is currently partnering with Seattle, NYC, Portland, and Denver to test electric shared mobility.

Driver and Vehicle Requirement Framework

The LADOT could pursue one of three policy tracks for evolving the existing for-hire regulatory framework to cover the above driver and vehicle requirements. Table 10 outlines the characteristics of each of these frameworks and they are summarized below:

- **Managing the New Normal:** This framework is based on acknowledging that TNCs have changed the ecosystem of for-hire services and works to manage public policy given the growth of TNCs.
- **Leveling the Playing Field:** This framework is based on the principles of leveling the playing field for existing human-driven for-hire services, to the maximum extent possible recognizing existing state legislative definitions and regulatory distinctions that may be outside LADOT’s control.
- **Preparing the For-Hire Industry for an Automated and Electric Future:** This framework focuses on preparing taxis to be competitive in an automated vehicle future.

Table 10: For-Hire Policy Frameworks

	Managing the New Normal	Leveling the Playing Field	Preparing the Taxi Industry for an Automated and Electric Future
Driver Requirements			
Training	Companies are required to implement a safety education and training program in effect for all taxicab drivers, whether employees or contractors, and an accessibility education and training program.	Companies are required to implement a safety education and training program in effect for all taxicab drivers, whether employees or contractors, and an accessibility education and training program.	LADOT works with companies to develop concierge services to provide assistance for passengers with disabilities in an automated taxi future.
Workforce Development	LADOT considers pursuing a job training and workforce development program to manage a shrinking industry.		LADOT pursues a job training and workforce development program to prepare for changing labor needs in automated taxi future.

Table 10: For-Hire Policy Frameworks (continued)

Fleet and Operations			
Equitable Service Standards	LADOT requires a minimum level of WAV service standards or requires taxis to pay into a fund on a quarterly basis equivalent to \$0.05 for each taxi trip (indexed to the same required fee for TNC trips). LADOT could consider waivers for companies that achieve minimum WAV fleet standards.	LADOT requires a minimum level of WAV service standards or requires taxis to pay into a fund on a quarterly basis equivalent to \$0.05 for each taxi trip (indexed to the same required fee for TNC trips). LADOT could consider waivers for companies that achieve minimum WAV fleet standards.	LADOT implements a WAV mandate for automated taxis.
Trade Dress	LADOT requires licensed taxis to have a top light, LADOT-approved color scheme along with the taxicab operator's name and phone number on both sides of the vehicle, and the taxicab fleet vehicle number on both sides and the rear of the taxicab.	LADOT adopts more flexible trade dress standards commensurate with TNCs.	
Insurance Coverage	Retain existing taxi minimum insurance limits, in accordance with the Los Angeles Municipal Code. Consider adding additional insurance requirements for taxis that have e-hail capability to ensure adequate coverage during all insurance periods.	Revise the Los Angeles Municipal Code with new taxi insurance requirements that conform to CPUC TNC insurance requirements.	Develop an insurance framework for automated taxis and shared automated vehicles that addresses liability for users and non-users in the event a collision or property damage occurs.
Fleet Age & Life Cycle	Vehicles may not exceed five model years of age – with only some exceptions.	Vehicles may not exceed five model years of age – with only some exceptions.	LADOT works with OEMs to adopt new life cycle standards given different maintenance and life cycle requirements for EVs and AVs.
Vehicle Air Quality Standards/ EV and ZEV Programs	LADOT does not pursue an EV/ZEV taxi program.	LADOT may pursue a Transitional Zero Emission Vehicles (TZEV) mandate, such as hybrids and plug-in hybrids with gasoline range extenders.	LADOT could offer grants and/or incentives for early adopters and financial penalties or the revocation of operating permits from taxis that fail to comply with final ZEV compliance timelines.
Vehicles and Inspections	Taxis must be inspected when first placed into service as a taxicab and then annually by LADOT.	LADOT adopts vehicle inspection standards commensurate with TNCs; or requires TNCs to comply with more stringent local vehicle inspection standards.	LADOT works with OEMs to adopt new vehicle inspection standards given different requirements for EVs and AVs.

5.E Data Collection, Management, and Privacy

Data is essential to maintaining lighter, more precise, and more flexible regulatory systems. Trip data can be used to ensure compliance with existing regulations and for the purposes of public safety, congestion management, and transportation planning, including curbside management, road improvements, traffic management, transit service planning, and the allocation of public monies for those purposes. Many state and local regulators require taxis and other for-hire vehicles, including TNCs, to report information about their operations, including passenger and driver data.

Data collection poses significant risks to personal privacy and threats to innovation and competition. Therefore, data should be collected in a quantity and at a level of detail that is reasonably necessary to implement and ensure compliance with regulations or to deliver legitimate public policy outcomes. Any rules and regulations should protect personal privacy rights of customers and drivers and should not result in the disclosure of confidential business information. The rules and regulations should require trip data to be anonymized and specify that it will be used only for the purposes of public safety, congestion management, and transportation planning, including curbside management, road improvements, traffic management, transit service planning, and the allocation of public monies for those purposes.

Personal Privacy Risks

Collecting data poses significant risks to personal privacy. Consumers have a reasonable expectation of privacy when they engage in private transactions, such as taking and paying for transportation. Making data that is collected for regulatory purposes public by posting it online or making it available upon request could diminish consumer confidence in taxis. Malicious data security breaches aside, even supposedly “anonymized” data can be cross-referenced with other information to identify individual users. For example, in 2014, the New York City Taxi and Limousine Commission publicly released anonymous and randomized trip information in response to a Freedom of Information Law request from a researcher who was able to extract personal details about drivers, including their home addresses and their driving routes. Another individual reportedly used the TLC’s anonymized data to identify Muslim drivers.

According to an April 2016 report from Uber, the company received 33 regulatory requests in the second half of 2015, involving trip data for more than 12 million Uber users. According to Uber, regulators frequently send “blanket requests without explaining why the information is needed, or how it will be used.” Although Uber stated that this trip data did not include personal information, it could reveal patterns of behavior and Uber claimed that the data provided more than regulators need to do their jobs. There is legitimate concern that anonymized and aggregated individual user data could be reversed-engineered for malevolent purposes such as stalking, identity theft, or financial fraud.

Competition and Innovation

Governments need to protect information that has been recognized as a trade secret or that a private company legitimately regards as confidential or proprietary. If a government makes public consumer data that is collected for regulatory purposes it could discourage innovation and competition. In addition, data collection is not free. Trip data that TNCs collect is the product of large investments by the respective companies to collect this information to use for their own competitive advantages. Companies must devote extensive resources to collect this data. It should not be assumed that an individual taxi owner-operator could afford the same technology as Uber or Lyft.

It is possible that, by publicly sharing trip data, competitors could use the data to their advantage. In addition to knowing where and when there is demand for taxis, competitors could use the data to cross-check a taxi company's public promotions against reported trips and obtain valuable metrics into the effectiveness of the company's marketing and promotions. At least one court has found that the data showing the pickup and drop-off zip code for each trip is a trade secret because, if divulged, it would reveal to competitors where and when Uber customers start and end their trips. In 2016, a researcher submitted a public records request for quarterly trip data reports submitted by Uber and Lyft. Uber and Lyft sought to block the release of this data, arguing it was a trade secret. The trial and appellate court agreed, but the data was released nonetheless. In May 2018, Washington Supreme Court ruled that, even though Uber and Lyft data on passenger pick-up and drop-off locations may be a trade secret, the City of Seattle should disclose such data under the state's Public Records Act unless doing so would cause substantial and irreparable harm.

TNCs report that they have invested significant resources in collecting and analyzing data to determine when and where drivers will be needed and how to engage drivers to meet rider demand. LADOT should be sensitive to this particular issue given that all of the stakeholders interviewed agreed that the Los Angeles taxi market has notably declined in recent years since the advent of TNCs and numerous companies noted that very few drivers will consider working the night shift any longer, and that taxis now operate almost exclusively during the daytime. To succeed, taxi companies operating in Los Angeles must be confident that proprietary regulatory information will remain confidential.

Recommendations

Any rules and regulations should protect personal privacy rights of customers and drivers and should not result in the disclosure of confidential business information. Data should be collected in a quantity and at a level of detail that is reasonably necessary to implement the taxi regulations. The rules and regulations should require trip data to be anonymized and specify that it will be used only for the purposes of public safety, congestion management, and transportation planning, including curbside management, road improvements, traffic management, transit service planning, and the allocation of public monies for those purposes.

Types of Data to Collect

Under the new California state law, taxicab companies that are authorized to operate in a jurisdiction must “[p]rovide documentation and trip data in the format required by an ordinance adopted pursuant to [Cal. Gov’t Code § 53075.5(a)] substantiating that the total number of prearranged and non-prearranged trips that originate within that city’s or county’s jurisdiction account for the largest share of the taxicab company’s total number of trips over the applicable time.” Since January 1, 2018, taxicab companies have been required to collect data that “demonstrates the total number of prearranged and non-prearranged trips that originate within a particular local jurisdiction for the purpose of determining where that taxicab company is substantially located, and shall provide that data to the city or county in which it is substantially located, consistent with Cal. Gov Code § 53075.5(h)(9).” Beginning January 1, 2019, taxicab companies will be required to provide the trip data collected in the previous 12 months “upon date of renewal to the city or county in which the taxicab company is substantially located.”

Highly detailed trip data—like information about when and where trips start and end—may be useful to researchers and urban planners and may help improve urban mobility. However, the public or research value of transportation data must be balanced against the interests of riders and drivers to protect their personal privacy and companies to protect data that is confidential or proprietary. To balance these competing interests, the following factors should be taken into consideration to determine what data LADOT should require taxi companies to collect beyond what is required by state law:

- Does the data contain, or can it be used to obtain, personal identifying information?
- How will the data be used?
- Can LADOT guarantee the security of data from breaches, internal leaks, and misuse?
- Will sharing the data with entities beyond LADOT weaken consumer confidence in the privacy of their data?
- Will requiring taxis to record, collect, and disclose the data create an undue burden on taxis as compared to other transportation services?

The risks and costs of collecting data may outweigh the usefulness of the data collected. For cities like Los Angeles, where taxis are a small fraction of all vehicles on the road, taxi trip data may not be particularly useful for transportation planning or achieving public policy outcomes not specific to taxis. In 2017, there were 2,361 taxicabs, compared to 7,762,453 total vehicles in the greater Los Angeles area.

The data that LADOT collects will depend on the type of regulatory system it ultimately adopts. The following are examples of trip and fare data that regulators collect from taxis, TNCs, and other for-hire vehicles:

- Pick-up and drop-off locations (either the address or the latitude and longitude for the points, calculated to specific decimal degrees)
- The date and time of request, pick-up, and drop-off
- Trip distance
- Vehicle license or permit number
- The driver’s name and permit or license number
- Whether a private or shared ride was requested
- An indication of whether the vehicle is wheelchair accessible
- Whether a wheelchair accessible vehicle was requested and, if yes, whether one was provided
- Itemized fare

- Rate type (metered, flat)
- Payment type
- Driver-reported passenger counts
- Booking method (street hail, taxi stand, pre-book)

Data Security & Privacy Protection Recommendations

Any rules and regulations should protect personal privacy rights of customers and drivers and should not result in the disclosure of confidential business information. It is best practice to require regulators to ensure that all data provided is safely and securely stored. Regulators should also take all reasonable measures and efforts to protect, secure, and, when appropriate, encrypt or limit access to any data provided. Data should be provided in an anonymized format and not include the personal information of passengers or drivers.

If possible, the state law should create an exemption for these records from public records and freedom of information laws and allow access to government agencies for the purposes of public safety, congestion management, and transportation planning, and the allocation of public monies for those purposes. For example, the District of Columbia deems TNC data confidential and exempts it from disclosure under the public records access law. However, the law allows the D.C. Mayor to enter into a confidential data sharing agreement with the Washington Metropolitan Area Transit Authority or the Metropolitan Washington Council of Governments to provide those entities with anonymized and aggregated trip data. New York TNC law also exempts the names and identifying information of TNC drivers obtained in connection with an audit from public disclosure.

Taxi Companies and Data Privacy Policy Recommendations

The following recommendations would help to ensure taxi companies employ appropriate and adequate privacy and security safeguards for all data collected, regardless of whether the data is provided to LADOT:

- As a condition of licensure, all taxi companies must have appropriate data privacy protections in place and enforced. The appropriateness of the data protection protocol will depend on the nature of the company, including whether drivers or passengers use an app in connection with the service.
- Taxi companies should collect and process only personal data that is necessary for the fulfillment of a legitimate business purpose.
- The nature and extent to which customers' personal data is being collected and used should be clearly and conspicuously identified and communicated to consumers at, or before, the time of collection. Taxi companies should clearly articulate how their users' data is retained and shared, and offer a clear opt-in or opt-out mechanism, as well as a right to access and correct the personal data held by taxi companies. The language used should be clear and easy to read, even when displayed on the screen of a smartphone.
- Proper administrative, physical and technical safeguards should be implemented and periodically tested to protect passenger personal data against unauthorized access, destruction, use, modification or disclosure, and risk of loss.
- Access to sensitive data such as geo-location and financial data should only be granted to a limited number of authorized individuals, for a set of limited and clearly defined legitimate business purposes. Employee and contractor training, together with strict disciplinary actions, are necessary steps to ensure the enforceability of these mechanisms.
- If passenger personal data is shared by a taxi company with a third party, the taxi company should take steps to ensure that the latter secures such data in a manner consistent with the taxi company's own privacy and security requirements; and should obtain express permission from consumers as to the specific entity or purpose for which such data will be used.
- Notification of data breaches should be promptly sent to all affected users and to LADOT.
- Taxi companies should obtain periodic assessments of their privacy and security practices by independent, third-party auditors, in order to insure compliance with the aforementioned requirements. Audit reports should be submitted to LADOT.

To manage new for-hire vehicle data, LADOT will require taxis to provide key data according to an established Mobility Data Specification (detailed in Appendix 7C). This will include the total number of prearranged and non-prearranged trips that originate within a particular local jurisdiction for the purpose of determining where that taxicab company is substantially located. LADOT will adopt data management policies to securely manage and dispose of old data and conditions for sharing and release that balances privacy, trade secrets, and compliance with the state's public records law. To level the playing field, LADOT will require taxis and other for-hire vehicles (the latter as a condition for operational access to LAX) to provide equivalent data on trips, occupancy, fares, people with disabilities served, and other data deemed appropriate by LADOT. Lastly, to prepare the taxi industry for an automated and electric future, LADOT will require automated taxis to provide data on trips, occupancy, fares, people with disabilities served, and other data deemed appropriate by LADOT as a condition for operating in the public rights-of-way.

5.F Full Rate Study with Potential Rate Structures

Current Taxicab Rates in Los Angeles

Under the Los Angeles' Taxi Riders Bill of Rights, passengers who take a cab in the City of Los Angeles (the "City" or "LA") have the right to be charged an accurate fare for the distance and time of their trip, including any approved surcharge based upon the City's designated taxi rates which appear on the inside of every licensed taxicab.¹ The following taxicab rates have been in effect since July 16, 2011, as authorized by the Board of Taxicab Commissioners ("Board").²

- **Drop Charge:** \$2.85 flag drop (first 1/9 mile or 37 seconds)
- **Distance Charge:** \$0.30 for each additional 1/9 mile (\$2.70 per mile)
- **Waiting/Time Delay Charge:** \$0.30 for each 37 seconds waiting/delay (\$29.19 per hour)
- **Airport Surcharge:** \$4.00 for trips originating at LAX
- **Airport Minimum Charge:** \$15.00 minimum fare per trip originating at LAX, plus the airport surcharge
- **Airport Flat Rate:** \$46.50 flat fare for trips between LAX and downtown Los Angeles,³ plus the airport surcharge for trips originating at LAX.

The total flag drop charge includes a \$0.20 per trip bandit assessment fee, which began in October 2006. This fee is dedicated to additional bandit enforcement by the Los Angeles Police Department and LADOT Investigators. The rate ordinance also allows taxicab franchisees to offer a special senior citizen rate of up to 10% off. The conditions for receiving such discounts must be filed with LADOT. The Taxicab Board of Commissioners also has the ability to establish special discounts on fare for specific types of taxi trips, which franchisees would be able to voluntarily offer.

The Taxicab Board uses the Taxi Cost Index ("TCI") to adjust taxi rates (shown in Tables 11 and 12). The TCI uses Consumer Price Index factors related to the cost of providing taxicab service, such as fuel, labor (wages), vehicle insurance, and vehicle maintenance. Under the current regulations, if the TCI changes more than 5% from the currently established rates for the cost of a five mile trip, then the Taxicab Board may, on its own initiative and without Council approval, adjust the taximeter rates +/- 1%. The Board regularly reviews the TCI components to make sure the index values are relative to actual industry costs.

Table 11: Taxi Cost Index Factors & Weighting as Revised in 2014

TAXI INDEX	WGT	CONSUMER PRICE INDEX SERIES
Fuel	11%	CPI - Gasoline (All Types) - Los Angeles - Riverside - Orange County - (Series CUUSA421SETB01)
Repairs and Maintenance	5%	CPI - Motor Vehicle Maintenance - US City Average - (Series CUUS0000SETD)
Driver Returns (WAGES PART A)	28%	Average Hourly Earnings – Total Private Sector Employees – State of California (Series SMU060000005000000003)
Driver Returns (WAGES PART B)	28%	CPI – All Items – Los Angeles – Riverside – Orange County - (Series CUUSA421SAO)
Insurance	6%	CPI - Motor Vehicle Insurance - US City Average - (Series CUUR0000SETE)
Dispatch Returns	13%	CPI - All Items - Los Angeles - Riverside - Orange County - (Series CUUSA421SA0)
Depreciation and Return on Investment	5%	CPI – Used Cars and Trucks - City Size A - (Series CUUSA000SETA02)
City Fees & Miscellaneous	4%	CPI - All Items - Los Angeles - Riverside - Orange County - (Series CUUSA421SA0)
Total	100%	Review TCI semi-annually. Potential revision if changes 5% or more from any current rate (interim or baseline)

Source: LADOT

Table 12: Taximeter Rate Changes from 1986 to 2015

Ordinance & Effective Dates	Flag Drop	Distance Charge	Waiting or Delay Charge	Other Fees	\$ of 5 mile trip	% Change
Ord. No. 161548 8/25/86 to 5/18/00	\$1.90 1/5 mile	\$0.20 1/8 mile	\$0.20 40 sec	\$24 airport flat rate; \$2.50 airport surcharge	\$9.58	11.14%
Ord. No. 173231 5/18/00 to 9/3/01	\$1.90 1/9 mile	\$0.20 1/9 mile	\$0.20 36 sec	\$27 airport flat rate; \$2.50 airport surcharge	\$10.70	11.69%
Ord. No. 174130 9/3/01 to 9/1/03	\$2.00 1/10 mile	\$0.20 1/10 mile	\$0.20 32 sec	\$30 airport flat rate; \$2.50 airport surcharge	\$11.80	10.28%
Ord. No. 174131 9/3/01 to 11/14/05				\$0.50 gas surcharge @ \$2.22; \$1.00 gas surcharge @ \$2.68		
Ord. No. 175365 9/1/03 to 11/14/05	\$2.00 1/10 mile	\$0.20 1/10 mile	\$0.20 32 sec	\$38 airport flat rate; \$2.50 airport surcharge	\$11.80	No change
Ord. No. 177017 11/14/05 to 12/25/06	\$2.20 1/11 mile	\$0.20 1/11 mile	\$0.20 30 sec	\$38 airport flat rate; \$2.50 airport surcharge	\$13.00	10.17%
Ord. No. 177018 11/14/05 to 12/25/06				\$0.50 gas surcharge @ \$2.73; \$1.00 gas surcharge @ \$3.28		
Ord. No. 177844 10/1/06 to current	\$0.20 bandit added					
Ord. No. 178050 12/25/06 to 8/14/08	\$2.45 1/7 mile; \$2.65 tti	\$0.35 1/7 mile	\$0.35 47.5 sec	\$42 airport flat rate; \$2.50 airport surcharge; \$15.00 min airport fee	\$14.35	10.38%
Ord. No. 178050 8/14/08 to 7/16/11	\$2.65 1/9 mile; \$2.85 tti	\$0.30 1/9 mile	\$0.30 37 sec	\$46.50 airport flat rate; \$2.50 airport surcharge \$15.00 min airport fee	\$15.85	10.45%
Ord. No. 181745 7/16/11 to current	\$2.65 1/9 mile; \$2.85 tti	\$0.30 1/9 mile	\$0.30 37 sec	\$46.50 airport flat rate; \$4.00 airport surcharge \$15.00 min airport fee	\$15.85	No change

Source: LADOT

Setting Rates

California law restricts LADOT’s ability to dictate pricing, leaving pricing decisions largely to the taxi companies while allowing the agency to act as pricing safeguard, if it wishes. Under Cal. Gov’t Code § 53075.5(a), local taxicab ordinances must allow a taxicab company to set fares or charge a flat rate. However, taxi regulators may set a maximum rate. A “taxicab company” includes a taxicab driver if a taxicab company consists of only one driver. In addition, regulator must require taxicab companies to disclose fares, fees, or rates to customers prior to the passenger accepting the ride. For pre-booked rides, companies may notify the passenger of the applicable rate by disclosing this information on the company’s website, mobile telephone application, or upon request by the customer for telephone orders.⁴ For walk-up rides and street hails, companies may provide the applicable rate on the exterior of the vehicle, within an application of a mobile telephone, device, or other Internet-connected device, or be clearly visible in either print or electronic form inside the taxicab.⁵

The state law would appear to preempt LADOT from adopting surge pricing or setting special event rates or rates based upon time of day, such as during rush hour or night time. While taxi companies are not explicitly prohibited from adopting surge pricing, the notice requirements would make that difficult for street hail and walk-up passengers.

Whether Rates Should Be Regulated or Subject to Free Market Forces

The U.S. National Work Group (“USNWG”) on Taximeters’ proposed changes to the National Institute of Standards and Technology (“NIST”) Handbook 44 which were adopted by the National Conference on Weights and Measures in July 2017 and have since been the de facto reference on regulatory matters pertaining to taximeters nationwide. There is a tentative Handbook 44 section called “Transportation Network Measurement Systems Code” (TNMS Code) which appeared in the 2018 edition and is intended to be used on a trial basis pending that Code becoming a permanent one. Under the NIST Handbook 44, the rates for taxicab service are required to be posted in the vehicle for the benefit of the passenger.⁶ In light of this requirement, it would seem to be in contravention of the HB44 Taximeters Code to allow a “dynamic” format for taxi rates. Still, this would not preclude taxi companies from setting different rates for surge pricing, special events, or other instances where the standard rate may not apply, so long as there is a posted statement in the vehicle that documents these variations from the standard rate. In contrast, the tentative HB44 TNMS Code requires rate information to be provided to the consumer prior to an agreement being made for services rendered.⁷ There is also an associated user requirement (UR.1.1.) that addresses the disclosure of rates.

The standard justification for regulating taxicab rates is information asymmetry—an example of a market failure where one party (usually the service provider) has more information than the other, causing an imbalance of power in transactions. Taxicab rates are typically comprised of a fare charge per mile to cover driving costs, and a fare rate per minute to cover net driver pay after expenses. Passengers who hail taxis on the street are poorly positioned to assess whether these rates are reasonable. This is compounded by the fact that 23% of the U.S. population does not own a smartphone to compare competing rates online.⁸ In an urgent situation where time is critical or during inclement weather, these passengers will have very limited options whether or not they accept the rate offered. If passengers were to wait for subsequent taxis to “price shop,” then they will incur additional search costs. The same applies to drivers who lack information to negotiate rates, since they will not know when the next passenger will request a fare—or their trip length/duration. So, there are high search costs for them as well.

If taxi rates are not regulated, then passengers who take a taxi from a taxi stand may be in a situation where taxis of different prices are available. In this situation, the consumer should not be obligated to take the first taxi in the queue and should instead be able to choose the taxi with the fare that they want. Requiring taxis to clearly display the rates so they are visible from the exterior of the taxi will alleviate information asymmetry. In addition, the City could require that taxicabs provide up-front pricing with an actual or estimated total fare.

It is possible that negotiating over rates might lead to discrimination against passengers based on demographical and geographical factors. There may also be additional congestion and reduced taxicab utilization due to increased idling timed if passengers are unwilling to accept a taxi’s rates. Search costs, equity and sustainability are, therefore, the basis for regulating rates for street hails. However, this does

not necessarily apply to dispatch services because passengers can utilize the apps or visit the websites of various companies to compare rates before deciding which ride to take.

While economies of scale could lead to a few taxicab companies dominating the market and charging “above cost” rates, the proliferation of TNCs has greatly reduced the demand for taxis and diminished their market power. In an open market, taxis would need to maintain competitive prices. It is possible that different rate structures will lead to competition among taxi entrepreneurs, which would benefit consumers. For example, a taxi company may decide to offer fixed-price service, while another might chose to base its rates on time and distance.

In Los Angeles, less than one-third of taxicab trips (~29%) were arranged through dispatch in 2014, the most recent year for which data is available.⁹ Approximately 28% of trips originated at LAX, and the rest (38%) were flag downs, walk-ups at taxi stand and hotels, and personal contacts. The breakdown is shown in Table 13. Therefore, it is recommended that Los Angeles regulate taxicab rates to the extent that it is legally allowed to do so consistent with state law.

Table 13: Los Angeles Taxicab Trip Counts - 2014

Dispatch Trips	2,288,154
LAX Trips	1,912,701
Other Trips (Flags, Hotels, Personals)	2,613,961
Total Trips Completed	6,814,816

Determining the Appropriate Rate for Taxicab Service

The almost uniform approach to setting metered taxicab rates in the U.S. and Canada involves a base fare (flag drop), a distance charge, and a time charge. The distance charge is basically a rate per portion of a mile after the first mile. This varies considerably in terms of the denominator (*e.g.*, per 1/5 mile, per 1/7 mile, per 1/10 mile). The time charge is a rate-per-minute waiting time that applies when the vehicle is idle or moving very slowly. In addition, many jurisdictions allow taxis to charge extra fees and surcharges for trips during peak or off-peak hours, additional passengers, additional stops, airport pick-up, snow emergencies, and other things. Some jurisdictions establish special rates for defined geographic areas or major attractors, such as airports, ports of entry, downtown business or commercial districts, major tourist attractions, and major transit hubs.

Although there are no standard formulas for determining these rates, some jurisdictions (including Los Angeles) tie rates to future increments in the Consumer Price Index (“CPI”). For example, if the CPI goes up by 2%, then rates should increase by 2% as well. As mentioned previously, the LADOT uses the TCI to decide if rates should be adjusted. LADOT’s most recent TCI review (covering the second half of 2016) found a 10% increase in taxicab service costs from the baseline (established in 2008). This would make a strong case for the taximeter rate to be increased, but the Taxi Board has decided to forego doing so in light of strong competition from TNCs.

To determine the proper rate for taxis in Los Angeles, we have relied upon the following data: taxi rates in other jurisdictions, TNC rates in Los Angeles, and the TCI.

Taximeter Rate Survey

Table 14 summarizes rates in nine of the most densely-populated US metropolitan areas.

Table 14: Taxi Rate Survey of the Nine Most Densely-Populated U.S. Cities

City	Base rate	Each additional mile	Wait rate per hour
Boston	\$2.60	\$2.80	\$28
New York	\$3.30*	\$2.50	\$30
Philadelphia	\$2.70	\$2.50	\$24
Washington D.C.	\$3.50**	\$2.16	\$25
Miami	\$2.95	\$2.40	\$24
Chicago	\$3.25	\$2.25	\$20
Seattle	\$2.60	\$2.70	\$30
San Francisco	\$3.50	\$2.75	\$33
Los Angeles	\$2.85	\$2.70	\$29.19
Max	\$3.50	\$2.80	\$33.00
Mean	\$2.99	\$2.53	\$27.02
Min	\$2.60	\$2.16	\$20.00

*Includes \$0.50 Metropolitan Transportation Authority Surcharge and \$0.30 Wheelchair-Accessible Vehicle Improvement Surcharge

**Includes \$0.25 Passenger Surcharge

Compared to other cities, the base rate for LA is below average while the distance and time charge are on the high end (~70th percentile). Assuming that taxicab fare rates should be correlated to urban density, then the higher-than-average distance and time charges would be reasonable given that Los Angeles is ranked second in the U.S. in terms of population density:

Table 15: Descending Order for Most Densely-Populated U.S. Cities

City	2015 Population Density
New York	8,550,405
Los Angeles	3,971,896
Chicago	2,720,556
Philadelphia	1,567,442
San Francisco	864,816
Boston	669,469
Washington	672,228
Seattle	684,443
Miami	440,989

Table 16 below includes detailed information about the rates and fees in some of these cities.

Table 16: Taxi Rates and Fees for Peer Cities

City	Meter Rates & Additional Fees, Charges, Tolls	Special Rates	App Dispatch Rate
Boston, MA¹⁰	<ul style="list-style-type: none"> Base Fare: \$2.60 up to first 1/7 mile Distance Rate: \$2.80 per mile (\$0.40 per 1/7 mile) Idling/Wait Time Rate: \$0.47 per minute (\$28.00 per hour) Toll for all trips from Boston proper to Logan Airport and North Shore Communities: \$2.75 per trip No toll from Boston proper to East Boston, not including Logan Airport 	<ul style="list-style-type: none"> Established flat rates to “Flat Rate Communities” outside Boston.¹¹ 	Taxis may only charge the amount indicated by the meter, the amount of a flat rate, or the amount set due to an emergency condition. ¹²
Chicago, IL¹³	<ul style="list-style-type: none"> Base Fare: \$3.25 Distance Rate: \$2.25 per mile Time Rate: \$0.20 per 36 seconds First additional passenger over the age of 12 years and under the age of 65 years: \$1.00 Each additional passenger after first passenger, over the age of 12 and under the age of 65 years: \$0.50 Vomit Clean-up Fee: \$50.00 Illinois Airport Departure Tax: \$ 4.00 	<ul style="list-style-type: none"> <u>Trips to Suburbs, Not from Airport:</u> The rate of fare is straight meter to the city limits plus one-half the straight metered fare from the city limit to the suburban destination. <u>Trips to Suburbs from Airport:</u> Trips from Chicago-O’Hare International Airport and Chicago Midway International Airport to all suburbs, except those listed below, are straight meter plus one-half the straight metered fare from the airport to the suburban destination. <u>Trips to the following suburbs are straight meter fares:</u> Alsip, Bedford Park, Blue Island, Burbank, Burnham, Calumet City, Calumet Park, Cicero, Des Plaines, Dolton, Elk Grove Village, Elmwood Park, Evanston, Evergreen Park, Forest View, Harwood Heights, Hines VA Hospital, Hometown, Lincolnwood, Merrionette Park, Niles, Norridge, Oak Lawn, Oak Park, Park Ridge, Riverdale, River Grove, Rosemont, Skokie, Stickney, and Summit.¹⁴ <u>Flat Taxi Shared Rates:</u> Two or more independent travelers may choose to share a taxi from a designated airport cab stand for a flat rate per person at the following rates per person: <ul style="list-style-type: none"> O’Hare to Downtown: \$24 Midway to Downtown: \$18 O’Hare/Midway to Midway/O’Hare: \$37 	Taxis may charge a higher rate than the meter rate or a flat prearranged fare when the taxi is booked through an app-dispatch system. The higher rate must be a product of the base rate multiplied by a numeric value. The flat rate will be binding.
Los Angeles, CA	<ul style="list-style-type: none"> Base Fare: \$2.85 up to first 1/9 mile Distance Rate: \$2.70 per mile (\$0.30 per 1/9 mile) Idling/Waiting Time Rate: ~\$0.4865 per minute (\$29.19 per hour; \$0.30 per 37 seconds) 	<ul style="list-style-type: none"> Trips between LAX and downtown Los Angeles: \$46.50 flat fare Minimum fare for trips originating at LAX: \$15.00 Surcharge for trips originating at LAX: \$4.00 	Metered or flat rates apply when the taxi is operating on an app-dispatch system..

<p>Miami, FL</p>	<ul style="list-style-type: none"> ● Base Fare: \$2.95 up to first 1/6 mile ● Distance Rate: <ul style="list-style-type: none"> ○ \$0.85 per 1/6 mile until the first mile (\$5.10 for the first mile) ○ \$2.40 per mile after the first mile (\$0.40 per 1/6 mile) ● Idling/Waiting Time Rate: \$0.40 per minute (\$24.00 per hour) ● Airport origination fee: \$2.00 	<ul style="list-style-type: none"> ● Flat rate taxi service applies to trips to and from Miami International Airport and the Port of Miami, the beaches, the Village of Key Biscayne, Zones A thru E, and Zones 1 through 5. ● Trips between Miami International Airport and the Port of Miami (both ways): \$27.00 flat fare 	<p>Metered or flat rates apply when the taxi is operating on an app-dispatch system.</p>
<p>New York City¹⁵</p>	<ul style="list-style-type: none"> ● Base Fare: \$3.30 (includes \$0.50 MTA Surcharge and \$0.30 WAV Improvement Surcharges) ● Traveling above 12mph, or per 60 seconds in slow traffic, or when the vehicle is stopped: \$0.50 cents per 1/5 mile ● Overnight Surcharge: \$0.50 per trip between 8:00 p.m. and 6:00 a.m. ● Rush Hour Surcharge: \$1.00 per trip between 4:00 p.m. and 8:00 p.m. weekdays, excluding holidays) ● Congestion Surcharge: \$2.50 per trip that starts, ends, or goes through the “Congestion Zone” 	<ul style="list-style-type: none"> ● Westchester and Nassau Counties: the amount on the meter for the portion of the trip that is inside the city limit, plus twice the metered amount for the portion from the city limit to the destination ● Newark Liberty International Airport: the amount on the meter, plus a \$17.50 surcharge ● Other Points Outside NYC: Negotiated flat fare (driver and passenger must mutually agree upon the fare before the trip begins) 	<p>In 2018, TLC began a 2-year pilot program to allow participating taxis to charge non-metered rates for trips booked through an approved app.</p>
<p>Philadelphia, PA¹⁶</p>	<ul style="list-style-type: none"> ● Base Fare: \$2.70 up to first 1/10 mile ● Distance Rate: \$2.50 per mile (\$0.25 per 1/10 mile) ● Idling/Wait Time: \$0.25 per 37.6 seconds ● Monthly Fuel Surcharge: as determined by the Board of the Philadelphia Parking Authority¹⁷ ● Airport Exit Fee (metered fares only): \$1.50 	<ul style="list-style-type: none"> ● Center City Zone to Philadelphia International Airport: \$28.50 flat rate ● Airport to the Center City Zone: \$28.50 flat rate for one passenger plus \$1.00 per each additional passenger over the age of twelve. ● Minimum Fare for metered rate trips from the Airport: \$11.00 (includes \$1.50 egress fee) 	<p>Metered or flat rates apply when the taxi is operating on an app-dispatch system..</p>
<p>San Francisco, CA</p>	<ul style="list-style-type: none"> ● Base Fare: \$3.50 up to first 1/5 mile ● Distance Rate: \$2.75 per mile (\$0.55 per 1/5 mile) ● Idling/Waiting Time Rate: \$0.55 per minute ● San Francisco International Airport (SFO) Exit Fee: \$4.00 ● E-hail fee: up to \$5.00 (optional) 	<ul style="list-style-type: none"> ● For out-of-town trips exceeding 15 miles beyond city limits, the fare will be 150% of the metered rate. ● For trips originating at SFO, the fare will be 150% of the metered rate if the trip exceeds 15 miles from SFO and ends outside city limits, except for those trips from SFO going through San Francisco and ending in Marin County or the East Bay. The 15-mile limit will apply only after the taxi has passed through San Francisco and gone 15 miles outside the city limit. ● Drivers may collect fare in advance for trips out of SFO and Oakland Airport. 	<p>Metered rates apply when the taxi is operating on an app-dispatch system.</p>

<p>Seattle, WA</p>	<ul style="list-style-type: none"> ● Base Fare: \$2.60 for first 1/9 mile ● Distance Rate: \$2.70 per mile (\$0.30 per 1/9 mile) ● Wait Time Rate: \$0.50 per minute (\$0.30 per 36 seconds). <i>Note:</i> Waiting time rates are charged when taxicab speed is less than 11 miles per hour or when a taxicab driver is asked to wait for the customer. ● Additional per passenger charge for more than two persons, excluding children under twelve years of age: \$0.50 	<ul style="list-style-type: none"> ● Taxicab associations may enter into contracts with businesses or non-profit organizations to provide service under a contract rate. Passengers transported under contracts must pay the fares to drivers using vouchers. Contract rates must be filed with the Director within two weeks of securing such contract and before implementing the contract rate. ● All taxicabs must charge a flat rate from the downtown hotel district to Seattle-Tacoma International Airport except when contract rates are in effect for the trip. The flat rate must be filed with the Director at the time of application and conspicuously displayed on vehicles. 	<p>Metered rates do not apply when the taxi is operating on an app-dispatch system.¹⁸ App-dispatch rates must be filed with the Director and transparent to riders prior to booking.</p>
<p>Washington D.C.¹⁹</p>	<ul style="list-style-type: none"> ● Base Fare: \$3.50 up to first 1/8 mile (includes \$0.25 Passenger Surcharge) ● Distance Rate: <ul style="list-style-type: none"> ○ Standard: \$2.16 per mile ○ Shared Ride Rate: \$1.20 per mile ● Idling/Wait Time Rate: \$0.42 per minute (\$25.00 per hour) <ul style="list-style-type: none"> ○ Wait time charged while taxicab is stopped or slowed to less than 10 miles per hour for longer than one minute. ○ Wait time begins five minutes after time of arrival at dispatch location; no wait time charged for premature response to a dispatch. ○ Wait time charged for delays or stopovers at the direction of the passenger. ● Telephone Dispatch Fee: \$2.00 ● Additional Passenger Fee: \$1.00 (regardless of the number of additional passengers) ● Declared Snow Emergency Fee: \$15.00 ● Delivery Service (messenger service and parcel pick-up and delivery): same rate as single passenger unless vehicle hired by the hour 	<p>Hourly Contract Rate:</p> <ul style="list-style-type: none"> ● \$35.00 for the first one hour or fraction thereof. ● \$8.75 for each additional 15 minutes or fraction thereof. 	<p>Metered rates do not apply when the taxi is operating on an app-dispatch system and may be set by the app-dispatch company.²⁰</p>

TNC Rate Survey

Has the taxi industry lost out to TNCs as an affordable option in Los Angeles? A taxi costs \$2.85 for the first 1/9 mile, \$0.30 for each additional 1/9 mile, and \$0.30 for each 37-second wait time. On the other hand, the most economical TNC option available in Los Angeles, UberX, charges no base fare, \$0.96 per mile and \$0.15 per minute. It should be noted that taxis charge per mile when moving and per minute while idling, whereas Uber charges per mile and per minute regardless of whether they are moving or idling, with a few exceptions. This makes it difficult to compare rates.

When comparing the cost of Uber to taxis, there are several other variables to consider. For one, many taxi riders tip their drivers 15-20% of the total fare. While Uber offers a tipping option, it is not as widely used.²¹ Uber also charges a minimum fare amount and employs surge pricing at times, which can make a dramatic difference in rates (1.5 to 1.8 times the cost). Some believe Uber is cheaper for longer trips moving at a faster speed and taxis are a more cost effective choice for trips in congested cities.²² Given that Los Angeles is the most congested city in the world, it would seem that taxis would be a better option for consumers.²³

Both Lyft and Uber's recent IPO filings have revealed the unsustainable nature of their business models.²⁴ On March 25, 2019, Uber and Lyft drivers in Los Angeles went on strike for one-day to protest Uber cutting its per-mile pay by 25% in Los Angeles County and parts of Orange County.²⁵ Uber and Lyft drivers in multiple U.S. cities have staged strikes to demand better pay and working conditions.²⁶ Keeping this in mind, the LA Board of Taxicab Commissioners may wish to monitor TNC rates and determine or adjust the maximum taxi rate to allow taxis to remain competitive.

Rate Recommendations

In fulfillment of one of the study's guiding principles to level the playing field among for-hire vehicles, LADOT desires to remove any restrictions on taxi fare setting, so long as they provide the customer with upfront fare calculation of the entire trip, in the same manner of TNCs. Customers will have the ability to compare pre-calculated rates between TNCs and taxis if they wish. This will be a more transparent way for customers to compare costs of their entire trip, rather than having to figure out which fare structure would better suit them based on base fares, per-mile rates and other charges. It will also be a pre-requisite for a requirement that all for-hire vehicles participate in a universal dispatch app, as part of the incentives framework.

5.H Revenue Implications

Revenue from Taxi and For-Hire Vehicle Regulations

Regulatory systems in the taxicab and for-hire transportation industry are typically defined by who may enter (taxicab companies or drivers may enter independently) and who controls the number of vehicles (the jurisdiction or the market). In addition, regulators use different mechanisms to ensure that drivers, vehicles, and operators meet jurisdictional standards (*e.g.*, background checks, drug and alcohol testing, vehicle inspections). The income that may legally be generated is the same across approaches: the amount necessary to cover the cost of regulation. Strictly speaking, LADOT may not use a regulatory framework to generate revenue or make a profit from taxicab or other private vehicle for-hire operators. The City would need to look to alternative sources—such as taxes—if it wished to generate revenue for investment into the taxicab industry or for improving transportation or service generally.

Municipalities in the U.S. are allowed to charge a reasonable fee to cover the costs associated with the cost of carrying out a regulation. This applies to controlling market access, ensuring service provider quality (*e.g.*, licensing companies and drivers, driver background checks, drug and alcohol testing), vehicle quality and appearance (*e.g.*, vehicle inspections), and access to, or use of, certain infrastructures, such as taxi stands and airports. However—as is the case in California—there are limits on the income that may be derived from fees. The amount charged cannot be greater than what is reasonably necessary to legitimately assist in the regulation by covering the cost of issuance, inspection, and enforcement. Under the recently revised California state law regulating taxicab transportation services, Cal. Gov't Code § 53075.5(c), cities and counties may impose “service charges, fees, or assessments in an amount sufficient to pay for the costs of carrying out an ordinance or resolution adopted in regard to taxicab transportation services.”

While an exact equivalence between the fee and the expense is not usually required, if fees are used to generate revenue or to offset the cost of general governmental functions, the fees may be invalid as an unauthorized tax. That said, many jurisdictions impose special taxes and surcharges on for-hire transportation precisely for the purpose of generating revenue.

To cover the costs of ensuring market participants meet jurisdictional standards, some municipalities shift the burden—and associated costs—to market participants. For example, it is common for TNC regulations to make the company responsible for registering drivers and ensuring drivers and vehicles meet certain minimum qualifications and jurisdictional standards. The newly revised California state law also shifts many of these burdens to taxicab companies, which includes a taxicab driver if a taxicab company consists of only one driver. California state law requires that taxicab companies that are authorized to operate in a jurisdiction provide a drug and alcohol testing program, maintain a driver safety education and training program, and provide an accessibility education and training program for drivers.

Potential Revenue from Different Approaches to Regulation

Regardless of driver access and fleet size regulations, the total revenue/income that may be generated is the same across approaches: fees and charges may not go beyond the costs of carrying out the regulation. In addition, potential sources of income from taxi and for-hire vehicle regulations are the same across regulatory systems and include taxicab operators, drivers, and vehicle owners as well as passengers. Jurisdictions typically derive income from:

- Controlling market access (*e.g.*, medallion sales, franchise fee, business license fee);

- Ensuring service provider quality (e.g., licensing companies and drivers, driver background checks, drug and alcohol testing);
- Ensuring vehicle quality and appearance (vehicle inspections);
- Controlling access to, or use of, certain infrastructures, such as taxi stands and airports;
- Charging for services; and
- Enforcing rules and regulations (penalties and fines).

Table 17 below shows the annual revenue and corresponding breakdown for several regulators in the different approaches to controlling market entry.

Table 17: Comparison of Market Entry Controls

Regulatory Approach	Annual Revenue
Medallion (Permit) System	<p>NYC Taxi & Limousine Commission: \$82,880,638</p> <ul style="list-style-type: none"> • Licensing fees (71.3%) • Other services and fees (11.4%) • Fines (17.25%) <p>San Francisco Municipal Transportation Agency: \$9,165,639</p> <ul style="list-style-type: none"> • Medallion sales (65.4%) • Taxi permit fees (0.9%) • Other taxi permit renewal fees (22.4%) • New driver permits (2.6%) • Driver permit renewal fee (6.2%) • Fine (0.83%) • Misc revenues (1.6%)
Company-Level Qualifications (Franchise & Certificate)	<p>Nevada Taxicab Authority: \$6,648,830</p> <ul style="list-style-type: none"> • Trip charges (87.0%) • Driver permit fees (2.95%) • Fines (3.5%) • Medallion fees (3.7%) • Misc (2.8%) <ul style="list-style-type: none"> ○ Application fees ○ Regulatory assessment ○ Photocopy charges ○ Treasurer’s interest <p>LADOT For-Hire Policy and Enforcement Division: \$4,803,000</p> <ul style="list-style-type: none"> • Taxicab Franchise Fees (39.8%) • Driver Permit Fees (16.6%) • Vehicle Application/Permit fees (24.8%) • Taxicab Vehicle Bandit fee (17.5%) • Penalties & Fines: Driver, Vehicle, Attendant, Taxicab Operator (0.9%) • Miscellaneous Revenue (0.1%) • Interest (0.2 %)

Open Market	<p>DC Department of For-Hire Vehicles: \$5,627,305</p> <ul style="list-style-type: none"> • Trip surcharges (66.5%) • Hackers licenses (22.6%) • Duplicate face id card (0.1%) • Late fees (1.3%) • Vehicle age waiver fee (0.3%) • Business licenses (1.6%) • One stop vehicle registration (4.5%) • Luxury class sedan (0.1%) • Taxi meter business license fee (0.3%) • PSP application fee (0.01%) • DDS application fee (0.01%) • Private vehicle for hire – register as com (0.4%) • Taximeter seals (0.03%) • Special event permit fee (1.3%) • Other revenue (0.9%)
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Medallion System

In medallion systems (also called permit or plate), the jurisdiction caps the number of vehicles that are allowed to operate, and anyone who wishes to operate a taxi in the jurisdiction must obtain a medallion. In a market with limited supply (drivers/vehicles) and growing demand (ridership), medallion licenses are assets with a rate of return comparable to other investment opportunities. Stable medallion prices spur medallion owners to optimize their taxi operation by generating lease revenue or fare revenue in order to reap returns on investments. The jurisdiction, on the other hand, receives income from the sale of medallions and from qualifying drivers and vehicles. If the jurisdiction allows permits to be transferred, it may charge a fee for transfers after the initial sale.

The medallion system is best for cities with a significant volume of street hail and cab stand pick-ups or where the city wants to limit the number of taxicabs operating on the streets. In a taxi market like LA, a cap on vehicle numbers may be unnecessary and could be overly burdensome if the market changes. This regulatory system cannot apply to TNCs, as the number of TNC vehicles currently cannot be limited, in accordance with California Public Utility Commission (CPUC) regulation.

Company-Level Qualifications under Franchise & Certificate Systems

Under a franchise system, such as the one in LA, the jurisdiction uses a competitive bidding process to select taxi companies to operate a certain number of taxis for a set period of time. Similarly, in a certificate-based system, the jurisdiction issues operating authority to taxi companies to operate a certain number of taxis based on specific criteria. Unlike medallions, certificates and franchises cannot be bought and sold. These systems are more predictable for regulators in terms of planning, since they can control the number of operators, vehicles, and drivers and are able to budget and allocate fees accordingly. Company-level controls also allow regulators to shift the burden of ensuring drivers and vehicles meet minimum standards to the companies.

Open Market

In an open market, there is no limit on the number of taxis that may operate in the jurisdiction, and individual drivers or companies that meet specific requirements (e.g., insurance, background checks, drug and alcohol testing, and vehicle inspections) may obtain

authority to operate. These jurisdictions place no limit on the number of taxis or companies that may operate at any given time and operators may enter and leave the market freely. In addition to collecting fees for operating authority—either from individual drivers or companies—open markets may also receive income from other fees associated with specific functions, such as facilitating pick-up and drop-off zones or providing access to HOV lanes.

An example of open entry with company-level qualifications is TNC regulations in California. In California, TNCs must obtain a permit from the California Public Utilities Commission (CPUC) to operate in the state. There is no limit on the number of TNC drivers or vehicles that can be associated with each TNC permit, and drivers may operate anywhere in the state. The CPUC assesses a \$1,000 initial application fee and a \$100 annual renewal fee for a TNC permit. TNCs are required to pay 0.33% of gross California revenues (plus a \$10 administrative fee) on a quarterly basis for the purpose of funding any expenses incurred by the CPUC in regulating TNCs, TNC drivers, and TNC vehicles. Neither drivers nor vehicle owners are required to obtain any special license to operate. TNCs cannot own their own fleets of vehicles.

The Open Market system of FHV regulation could apply to both TNCs and taxicabs and doing so could fulfill the LADOT goal of putting all FHVs on a level regulatory playing field. Regardless of the market entry controls that LADOT uses, LADOT could specify more stringent requirements (*e.g.*, insurance, background checks, drug and alcohol testing, and vehicle inspections) for taxicabs than TNCs. However, according to CPUC regulations, LADOT cannot currently extend these same requirements to TNCs. Nonetheless, the taxicab industry may be amenable to meeting these additional requirements, as doing so uniquely qualifies them to provide paratransit services as a core element of their business model.

Incentives (Access and Use Permits)

Under the proposed framework, LADOT would offer incentives to entice companies to perform in a way that would advance the City's policy goals. For example, taxis and other private vehicles for-hire would have to pay a fee to use and access certain privileges (taxi stand privileges, vehicle occupancy, drop-offs in designated zones in congested areas or at the airport, *etc.*). Assuming it is within LADOT's authority to do so, the agency could charge a reasonable fee to cover the administrative costs associated with such a program, as well as any associated inspections that may be required, and enforcement, provided that the fee is related to the service.

Countywide and TNC Regulatory Implications for Revenue

LADOT has begun working with other incorporated cities in Los Angeles County on multi-jurisdictional coordination, specifically centralized regulation of vehicles and drivers by LADOT. Although LADOT does not have data regarding the total number of additional drivers and vehicles that it would be responsible for licensing, presumably the agency's income from driver and vehicle permit fees would increase and represent a higher portion of total revenue. According to the U.S. Bureau of Labor Statics, there were 7,150 individuals employed as taxi drivers and chauffeurs in the Los Angeles-Long Beach-Glendale metropolitan area. According to LADOT statistics, in FY 2017–18, there were 2,995 permitted taxicab drivers in LA. Meaning, LADOT's taxi permitting volume could more than double.

An additional variable would be the volume of permits and fees associated with providing TNC access to certain privileges, such as access to HOV lanes, pick-up and drop-off zones or the like. At this point in the

study, the volume of TNC activity in Los Angeles is unknown and the magnitude of TNC interest in participating in such incentives also cannot be known at this time. For oversight of TNC activity, the volume of oversight activity would relate less to the volume of TNC vehicles in general and more to the level of interest that TNCs have in participating in the various incentives. Additional stakeholder outreach during the rollout of the incentive-based program may help to determine a projected level of interest and associated permitting activity.

Microtransit

Microtransit as a service is currently being piloted by both LADOT and LA Metro as a contracted, subsidized service in defined geographic areas. However, LADOT is interested in different potential models of operation. The current pilot projects most closely align with the franchise system of regulation. With this model, access to certain privileges and infrastructure (such as HOV lanes and pick-up and drop-off areas) would be negotiated on a case by case basis with the approved, franchised service. An advantage of this approach is that approved services could be required to operate in such a way that they are complementary to existing fixed route transit, rather than competitive with them.

However, it would also be possible for microtransit to operate with an open market regulatory approach. Historically, this approach would more closely resemble jitney or dollar van services. Some cities, such as New York City, that take this approach to microtransit and permit all services that meet a set of basic safety or other requirements (such as use of designated types of curbspace), have seen networks of routes and on-demand services from companies such as Via and Chariot develop. While in some cases they have functioned as complementary to existing fixed route services, in other cases they have been competitive with them and have contributed to increased traffic congestion. An example of this is the proliferation of Via service in Manhattan below 96th Street and in other areas of the city well served by existing transit.

6. Conclusions

In recent years, Los Angeles is undergoing an urban renaissance. Demographic shifts, such as young professionals and retiring baby boomers relocating to the city's urban and historic neighborhoods. These demographic changes, together with urban renewal and an increasing suite of modal options often facilitated through internet and mobile technologies, are beginning to transform how Angelenos live and travel. This potentially transformative role in mobility has become a focus of conversation among the LADOT, and existing and new service providers.

This report underscores the need to adapt Los Angeles' for-hire regulation to an everchanging and dynamic mobility ecosystem, particularly given increasingly blurring lines between existing and innovative transportation modes. As shared and automated mobility services continue to expand and operate alongside taxis, limousines, and other for-hire service providers, this report provides a blueprint to:

- Level the playing field among various for-hire services;
- Monitor customer service, accessibility, and other operational and performance outcomes;
- Improve transportation equity and accessibility; and
- Regulate innovative and emerging mobility services.

This report proposes an incentive-based framework based on LADOT's values for regulating:

- For-hire Services (Taxi/TNCs)
- Automated For-Hire Services (Taxi/TNCs)
- HOV/Microtransit
- Automated HOV/Microtransit
- Goods Delivery
- Automated Goods Delivery
- Urban Air Mobility (UAM)
- Shared Micromobility

This flexible regulatory framework provides the opportunity to encourage private mobility companies to support public sector goals, such as sustainability and equity, while enabling the private sector to innovate. Within each regulatory category, the proposed framework suggests incentives for service providers that achieve or exceed certain performance metrics. This proposed regulatory framework would change the environment in which private companies make decisions in an effort to nudge mobility service providers to align their services toward the city's goals.

The convergence of mobility services, shared modes, electrification, and automation will undoubtedly transform how Angelenos travel and how the city's streets are designed. While the impacts of emerging technologies on auto ownership, parking, and travel behavior remain to be seen, what is clear is that regulators and policymakers will need to respond to these changes in order to balance public goals with commercial interests, and to ensure sustainable and equitable outcomes. This report represents an important milestone for the City of Los Angeles to adapt to changes within the mobility ecosystem and prepare for this transformation.

7. Appendix

7. A Full Peer City Review

Abu Dhabi, United Arab Emirates

Estimated population: 1.42 million (2018)

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

The Abu Dhabi Integrated Transport Center (“ITC”) is the independent authority that regulates all taxi and for-hire vehicle transportation in the Abu Dhabi Emirate. The ITC was established in November 2016 and reports to the Department of Transport (“DoT”), which oversees Abu Dhabi’s integrated public transport network that comprises a metro, light rail transit, buses and bus priority, school bus, water transit, taxis, and on-demand services among other functions.⁷³

The ITC regulates public transport, parking management, traffic control centers, weighing stations, and logistics facilities for land transport of goods in Abu Dhabi. Abu Dhabi law prohibits engaging in any of the activities of the ITC without the ITC’s permission. All for-hire vehicles, including public taxis and private-hire cars, including app-based and traditional black car services, and luxury limousine services, are under ITC’s jurisdiction. TNCs are regulated as private-hire cars, which the ITC regulates similar to taxis.

The ITC has the authority to determine market size and structure, rates, fleet size, geographical boundaries, driver licensing standards, technical and safety standards and specifications. Public taxi companies operate under a franchise system.⁷⁴ The ITC selects operators through a competitive bidding process and then sets the terms and conditions for the licenses. ITC works with seven franchisee taxi companies. Taxis make an estimated 6 million trips per month in Abu Dhabi. Of those, approximately 60,000 trips are booked using the Abu Dhabi Taxi mobile app.⁷⁵

Improving Transportation Equity & Accessibility

Access for People with Disabilities

The Abu Dhabi DoT issues electronic discount cards that offer UAE nationals with disabilities a 50% reduction on taxi fares. The discount is part of the Tawseel initiative of the TransAD and the Ministry of Social Affairs.⁷⁶

⁷³ Local Law No. 19 of 2006, Regarding the Regulation of Transport by Hire Cars in the Emirate of Abu Dhabi, available at

dot.abudhabi.ae/ckfinder/userfiles/files/Law%20No_%2019%20for%20The%20Year%202006%20Regarding%20Taxi%20Transport%20Regulation%20in%20The%20Emirate%20of%20Abu%20Dhabi.pdf.

⁷⁴ Local Law No. 19 of 2006, Regarding Taxi Transport Regulation In the Emirate of Abu Dhabi, available at dot.abudhabi.ae/ckfinder/userfiles/files/Law%20No_%2019%20for%20The%20Year%202006%20Regarding%20Taxi%20Transport%20Regulation%20in%20The%20Emirate%20of%20Abu%20Dhabi.pdf.

⁷⁵ Ramona Ruiz, THE NATIONAL, Abu Dhabi taxi regulator to introduce free Wi-Fi in cabs, May 29, 2016, www.thenational.ae/uae/transport/abu-dhabi-taxi-regulator-to-introduce-free-wi-fi-in-cabs-1.210350.

⁷⁶ See Government of Abu Dhabi, *Getting Support for People of Determination*, www.abudhabi.ae/portal/public/en/homepage/family/getting-support-people-of-determination.

Reducing Traffic Congestion; Emissions Reductions

Under the Abu Dhabi regulations, taxi fleet size is determined by the ITC and operators must obtain authorization to add vehicles to their fleets. The ITC considers the following factors when determining fleet size and requests to add vehicles:

- Utilization rate of taxis;
- Demand for private-hire car services;
- The level of service private-hire cars are providing passengers, including waiting time and the availability of vacant taxis; and
- The impact the increase will have on taxis, limousines, public transportation, and traffic congestion.

Abu Dhabi DoT started Intelligent Transport Systems (“ITS”) integration in 2014, with the launch of the Integrated Transportation Information and Navigation System (“iTINS”) and the ITS Fiber Optics Communication Network. Abu Dhabi plans further integration in the future with the Integrated Payment System Project to link all transit modes—bus, taxi, parking, *etc.*—in a single payment system. There is also ongoing coordination with the National Committee for Integrated Passenger Transport Services to establish a UAE-wide integration of all inter-city transport information and services.

Leveling the Playing Field

TNCs are regulated the same as PHCs and must obtain a franchise from the ITC to operate in Abu Dhabi.⁷⁷ All drivers are required to be licensed by the ITC and must pass a criminal background check. In addition, vehicle models and rates are subject to ITC approval.

Arlington, Texas

Estimated population: 396,394 (2017).

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

In Texas, TNCs are regulated by the State,⁷⁸ while taxicabs and other private vehicles for-hire are regulated by local municipalities.⁷⁹ In Arlington, the City of Arlington Handitran, Special Transit Division is the agency responsible for administering and enforcing the local rules and regulations for taxicabs and other vehicle-for-hire services. Arlington requires all taxicab and other vehicle-for-hire operators—including tour vehicles, limousines, shuttles, pedicabs, and horse-drawn carriage service—obtain a certificate of public convenience and necessity before providing service.⁸⁰

Reducing Traffic Congestion; Emissions Reductions

Pedicabs and Neighborhood Electric Vehicles: During Dallas Cowboys games and other events at AT&T Stadium and Globe Life Park, the City prohibits parking on the surrounding neighborhood streets. These neighborhoods are divided into zones, and “No Parking” signs may be activated in any or all of the zones as needed. When the signs are activated, all on-street parking is prohibited. On-street parking in the

⁷⁷ Regulations for Transport By Private Hire Cars (Law No. 19 of 2006), available at dot.abudhabi.ae/ckfinder/userfiles/files/Regulations%20for%20Transport%20by%20Private%20Hire%20Cars.pdf.

⁷⁸ Tex. Occ. Code Title 14, Subtit. C, Ch. 2402.

⁷⁹ Tex. Loc. Gov’t Code § 215.004.

⁸⁰ City of Arlington Code of Ordinances, Transportation (Amend Ord. 10-007, 1/12/10), available at www.arlington-tx.gov/cityattorney/wp-content/uploads/sites/15/2014/05/TRANChapter.pdf.

zone is restricted to those who live or work in the zone, and everyone else may park only in designated paid parking lots.

To shuttle people between the parking lots and the venues during special events, Arlington allows pedicabs and Neighborhood Electric Vehicles (“NEVs”) to pick-up and drop-off passengers in the Entertainment District from the time parking lots open until three hours after the event ends.⁸¹ NEVs are low-speed electric vehicles with a maximum speed of 35 miles per hour on a paved, level surface.⁸² Trips do not need to be pre-arranged, but Pedicabs and NEVs-for-hire may only load and unload passengers on certain streets and at designated Vehicle-For-Hire stands.

Pedicab and NEV-for-hire operators must obtain a Certificate of Operation from the Arlington Public Works and Transportation Department. By ordinance, the City capped the number of pedicabs permits at 40 and the number of NEV-for-hire permits at 25. In addition, there is a limit of four pedicab and five NEV-for-hire permits per operator. The city uses a public lottery system if it receives applications for more than 40 pedicabs or 25 NEVs.

Rideshare: In December 2017, the City of Arlington partnered with Via Transportation, Inc. to provide on-demand ridesharing service in select areas of Arlington for \$3 per person per trip.⁸³ Via uses a smartphone app and dynamic routing to provide an efficient on-demand mobility solution.

Via Rideshare operates between 6 a.m. and 9 p.m. Monday through Friday and between 9 a.m. and 9 p.m. on Saturday, with extended hours during special events in Arlington’s Entertainment District. Customers can book through the Via app or by calling a live support phone line, which will also assist customers who do not have a smartphone with setting up an account. Via’s fleet includes a limited number of wheelchair accessible vehicles that pick-up customers at their doorstep as needed.

The service area has been expanded based on customer demand and currently includes popular destinations including downtown Arlington, the Entertainment District, Arlington Memorial Hospital, University of Texas-Arlington, and the CentrePort TRE station, which is a boarding station for trains to Dallas/Fort Worth International Airport and to the CentrePort employment centers. The station is also popular for trains to the Dallas Mavericks and Dallas Stars games and events at American Airlines Center.

In the first twelve months of the Via Rideshare pilot program, over 12,200 people signed up for Via accounts (approximately 3% of the total population) and took more than 112,500 rides.⁸⁴ Average wait time was 11.5 minutes, customer satisfaction was at 97%, and there more than 70% repeat customers.

For the first contract year, the City contributed approximately one third of the project cost (\$322,500) and the Federal Transit Administration (“FTA”) covered the remainder of the costs.⁸⁵ The City renewed

⁸¹ Arlington Transportation Ordinance, Art. X (amended by Ordinance No. 16-062).

⁸² NEVs must comply with Federal Motor Vehicle Safety Standard 500 (Low Speed Vehicles).

⁸³ City of Arlington, Residents, *Via Rideshare*, www.arlington-tx.gov/residents/via/.

⁸⁴ City of Arlington, FY 2019 Quarterly Update.

⁸⁵ Susan Schrock, *Arlington’s Via On-Demand Rideshare Service Area Continues to Grow*, City of Arlington, March 26, 2018, www.arlington-tx.gov/news/2018/03/26/arlington-via-demand-rideshare-service-area-continues-grow/.

the contract to continue service through 2019. The estimated cost for the one-year renewal is \$1,802,375, with the City providing a portion of the funding in amount not to exceed of \$995,000 and the FTA providing the remaining funding in an amount not to exceed \$807,375.⁸⁶ Approximately \$300,000 of fare revenue will also support the program.

The City plans to use data collected through the pilot program to inform future transportation planning decisions.

Openness/Flexibility for New Technology

The Arlington City Council has identified “Put Technology to Work” and “Enhancing Regional Mobility” as two of its priorities.⁸⁷ Arlington was one of the first U.S. cities to offer on-demand ridesharing as an innovative public transportation solution. The service—Via Rideshare—aligns with the City Council priority to Enhance Regional Mobility, “is designed to provide affordable transportation to key areas of Arlington, allowing riders to access entertainment, shopping and dining options, work or school, and even medical appointments.”⁸⁸

In August 2017, Arlington became the first U.S. city to offer continuous automated vehicle service to the general public with the Milo automated shuttle pilot program.⁸⁹ Under the year-long pilot, Milo low-speed automated shuttles provided free rides during over 110 events at AT&T Stadium and Globe Life Park in the Entertainment District. The shuttles were wheelchair accessible and could hold up to 12 passengers (or 10 passengers plus 1 wheelchair).

Figure A1: Milo Shuttle



Source 1: City of Arlington

⁸⁶ City of Arlington, FY 2019 Quarterly Update.

⁸⁷ City of Arlington, *City Council Priorities*, www.arlington-tx.gov/budget/city-council-priorities/

⁸⁸ City of Arlington, Office of Communication, *Enhance Regional Mobility*, FY 2019 Quarterly Update, Vol. 7, Issue 2, available at view.joomag.com/enhance-regional-mobility-february-2019/0987338001549395059?short.

⁸⁹ City of Arlington, *Milo Pilot Program Closeout Report*, January 2001, available at www.arlington-tx.gov/wp-content/uploads/2019/01/Milo-Closeout-Report.pdf.

In October 2018, as part of the City’s transportation technology pilot program, the City partnered with Drive.ai to begin the first fully automated ride-hailing service in Texas.⁹⁰ Drive.ai shuttles are available to the general public in the Entertainment District and surrounding areas. Shuttle passengers Drive.ai shuttle at kiosks located within the service area or through the Drive.ai app. The shuttle service is free and connects passengers with pre-determined pickup and drop-off points, including employment centers, restaurants, entertainment venues, public recreational spaces, and the Arlington Convention Center. During Cowboys home games, Drive.ai shuttles transport people to and from AT&T Stadium and designated kiosks from two hours prior to kick-off until one hour after the game ends.

Figure A2: Drive.ai Shuttle



Source 2: City of Arlington

Chicago, Illinois

Estimated population: 2.716 million (2017).

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

Transportation infrastructure and mobility in the City of Chicago is primarily managed by the Chicago Department of Transportation, the Chicago Transit Authority, the Department of Business Affairs and Consumer Protection (“BACP”), the Mayor’s Office for People with Disabilities, and the Office of the Mayor. These entities build and maintain infrastructure, deliver services, and regulate operators.

BACP oversees the for-hire passenger vehicle industry, which is the second largest market in the U.S., and includes the city’s licensed taxicab, pedicab, livery, TNCs (called “Transportation Network Providers” or “TNPs”), and horse-drawn carriage vehicles. BACP licenses and regulates over 10,000 public passenger vehicles, 14,000 public chauffeurs, and over 100,000 TNC vehicles and drivers.⁹¹

⁹⁰ City of Arlington, Residents, *Automated Vehicles*, www.arlington-tx.gov/visitors/av/.

⁹¹ City of Chicago, March 2019.

Chicago operates on a medallion taxi system. An estimated 39% of taxi medallions are owned by individuals as opposed to fleets. The value of Chicago taxi medallions reached its peak in 2013, at a price of \$357,000, while its bottom sale price hit an all-time low in 2017 at a value of \$35,000.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

According to the City of Chicago's "Roadmap for The Future of Transportation and Mobility In Chicago: Chicago's New Transportation and Mobility Task Force":

The City Council established the **Accessibility Fund**, which provides taxi medallion licensees a reimbursement to support the conversion of taxicabs to wheelchair accessible vehicles. While this Fund has supported the growth of wheelchair accessible vehicles, expansion of accessible mobility options and services is needed, and further focus is required on the needs of people with other disabilities, including visual and hearing impairments.

Further, TNPs have recently adopted and begun implementing City-approved accessibility plans and the City has provided financial incentives for TNPs to provide accessible trips to riders in need. The City continues to urge TNPs to reach a state of equitable service, where wheelchair users or people with any kind of disability can expect the same level of service (availability, wait times) as non-disabled users.

Equitable Access

Chicago's **Underserved Areas Tax Credit** ("UATC") was designed to give taxis and TNCs an incentive to service areas with high levels of "transit dependent populations" and underserved areas.⁹² Under the current UATC model, TNCs may claim up to a 50% credit against the Ground Transportation Tax on each qualified trip (currently \$0.60/trip for TNCs) and Taxicab Medallion License Holders may claim a up to a 50% credit against the Ground Transportation Tax each month equal to the percentage of qualified trips (currently \$98/month for taxis). However, this credit has been underused by both sectors, and Chicago's New Transportation and Mobility Task Force is recommending changes to the program.⁹³

Leveling the Playing Field

The number of traditional taxi and other for-hire service providers is down 40% since Uber and other TNCs entered the Chicago market in 2013. In certain parts of the city—including areas with an existing "robust" public transit network—TNC travel has increased from approximately 2 million monthly trips in 2015 to 9 million trips in 2018.⁹⁴ The disruption in the for-hire passenger vehicle market has caused the City of Chicago to examine some of its most vulnerable areas concerning customer experience and pro-business practices.

In 2014, Chicago Mayor Rahm Emanuel introduced "Taxi Fairness" reforms so that taxi drivers could compete with TNCs. Measures included reduced credit card fees assessed to taxi drivers, revenue sharing rules for vehicle advertisements, and streamlined training and enforcement process for

⁹² City of Chicago, March 2019.

⁹³ City of Chicago, March 2019.

⁹⁴ City of Chicago, March 2019.

drivers.⁹⁵ In January 2018, new laws allowing taxicab drivers to offer flat taxi fare rates or lower taxi fare rates to passengers in advance through an app went into effect.

In January 2018, new laws aimed at reducing regulatory burdens to the taxicab industry went into effect, including the following:⁹⁶

- Newer taxicab vehicles (less than five years) need one annual vehicle inspection only.⁹⁷ If the vehicle age is over six years, then two semi-annual scheduled inspections will be required.
- An owner of a single medallion may now opt to join an affiliation or be independent.
- An independent taxicab may now be leased to a licensed taxi driver if the medallion licensee has an approved safety device and workman's compensation insurance on file with BACP.
- Experienced licensed livery, Commercial Driver License (CDL), TNC drivers may now request a waiver of the taxi chauffeur licensing course.
- Implemented a universal definition of "criminal background check" for all chauffeur license types to include checks of national databases.
- Extended the time frame for a taxicab vehicle to be out of service prior to surrendering the medallion from 20 to 30 consecutive days.

The following new laws intended to provide financial relief to the taxicab industry also went into effect in January 2018:

- Extended taxicab vehicle utilization life by 3 additional years. Gas fuel source vehicles may stay in service for 7 years. Fuel efficient vehicles may stay in service for 10 years, plus an additional 1 year if the vehicle passes inspections. Wheelchair accessible vehicles may stay in service for 10 years, plus an additional 1 year if the vehicle passes inspection.
- Increased odometer readings for vehicles being introduced as taxicabs from 75,000 miles to 125,000 miles.
- Accessibility Fund Fees will be assessed to operating taxis only and will no longer be assessed to medallion licenses in "surrender" status.
- Consolidated taxicab industry licenses. Licensed taxicab affiliations no longer required to secure an additional taxicab two way dispatch license. Licensed taxicab license managers and Illinois licensed attorneys no longer required to secure an additional license broker license.
- Reduced taxicab affiliation license fees from \$500 annual fee plus \$15 per affiliated taxicab to \$500 annual fee plus \$5 per affiliated taxicab.
- Eliminated the \$75 inspection fee for un-scheduled change of equipment.

Dubai, United Arab Emirates

Estimated population: 2.79 million (2018).

⁹⁵ City of Chicago, Office of the Mayor, Press Release, *Mayor Emanuel Introduces Innovative 2014 Taxi Driver Fairness Reforms*, September 30, 2014, available at www.cityofchicago.org/city/en/depts/mayor/press_room/press_releases/2014/sep/mayor-emanuel-introduces-innovative-2014-taxi-driver-fairness-re.html.

⁹⁶ BACP, *Taxicab Industry Reforms Effective January 1, 2018*, www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/medallionowners/2018-TaxicabIndustryReformFlyer.pdf.

⁹⁷ BACP Rule TX3.03.

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

The Dubai Roads and Transport Authority (“RTA”), established in November 2016, is the independent authority that regulates public and private transportation, roads, and traffic in the Emirate of Dubai and between Dubai and other Emirates of the UAE. RTA has authority over public and private for-hire transportation, public and private buses, trams (light rail), and railways, among other modes of public and private transportation.

The Public Transport Agency (“PTA”) of the RTA oversees regulation of public taxicabs, “luxury cabs” (limousines and black cars), and TNCs.⁹⁸ PTA has the authority to determine market size and structure, fleet size, geographical boundaries, driver licensing standards, technical and safety standards and specifications for FHV operations, and requirements for making taxicabs and luxury cabs available to persons with disabilities.

Dubai RTA uses a franchise system to authorize taxicab and luxury cab operations in Dubai. RTA works with eight franchisee cab companies that are either owned or backed by the government and operate 11,327 registered taxis. In 2017, taxis provided a total of 101,680,328 trips to 175,430,880 passengers.⁹⁹

The largest taxi company is the RTA-owned Dubai Taxi Corporation (“Dubai Taxi”), which franchises out taxi operations to other companies.¹⁰⁰ There are also a handful of smaller, privately-owned taxi companies.

Dubai Taxi offers a range of specialized taxi services:

- **Public Taxis:** Open to all customers 24/7. Public taxis can be reserved by dispatch center, street flagging, or at taxi rank/stand located at hospitals, shopping malls, and outside all metro stations. Public Taxis are recognizable by their red rooftop. If there is no taxi waiting at a rank, a customer can send a text message with the taxi rank number and a taxi will be dispatched to that location. Rates of fare are meter-based (time and distance), zone-based, or time-based.
- **Airport Taxis:** Exclusive to arriving visitors to Dubai International Airport.
- **Ladies and Families Taxi:** Female drivers provide service exclusively to ladies and families of all nationalities and can be reserved via Dispatch Center directly or picked-up at Dubai International Airport, various taxi ranks. This service can be distinguished from other taxis by the vehicle’s pink rooftop.
- **People of Determination Taxi (Special Needs Taxis):** Vans equipped and designed to accommodate wheelchairs and other mobility devices. Service can be reserved in advance via Dispatch Centre. These vehicles are distinguished by their size/model, red roof top, and universal special needs blue icon logo on the side passenger doors and back window.
- **Limousines:** Limousine Service is a chauffeur-driven service using luxury vehicles such as Tesla, Lexus, and Infiniti that is designed to serve the needs of Dubai visitors, business professionals,

⁹⁸ Executive Council Resolution No. 6 of 2016, Regulating Passenger Transport by Cars in the Emirate of Dubai, available at www.rta.ae/wps/wcm/connect/rta/b531d2ec-753a-4a0e-863f-2c6f643393a5/passenger-transport_en.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE.Z18_N004G041LOBR60AUHP2NT32000-b531d2ec-753a-4a0e-863f-2c6f643393a5-lxxPSpR.

Taxi Dubai, *About DTC*, www.dubaitaxi.ae/about_dtc.html.

⁹⁹ Government of Dubai, Statistics Center, *Taxi Statistics Emirate of Dubai (2015–2017)*, www.dsc.gov.ae/Report/DSC_SYB_2017_11%20%2018.pdf.

¹⁰⁰ Taxi Dubai, *About DTC*, www.dubaitaxi.ae/about_dtc.html.

tourism industry clients, such as, hotels, tour operators, airlines as well as corporate and government clients. Service is available 24/7.

DTC also offers taxi with driver rental service on an hourly basis to travel within Dubai and a rent-a-chauffeur service called “Mashweer” that connects fully-trained and competent drivers without taxis to interested parties on a daily, weekly, or monthly basis. The customer is required to provide a vehicle with comprehensive insurance and pay for gas.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

The PTA is empowered to determine the requirements for facilitating the use of taxicabs and FHVs other than TNCs by persons with disabilities. Dubai Taxi offers a Special Needs Taxi service called People of Determination, which it describes as “a highly sophisticated vehicle, equipped and design with travel comfort in mind.”¹⁰¹ A Special Needs Taxi can be reserved 24 hours in advance via Dispatch Centre and is available at the airport taxi stands.

Reducing Traffic Congestion; Emissions Reductions

RTA set a goal of reducing carbon emissions from the taxi sector by 2%, as required by the Dubai Supreme Council of Energy and the Green Economy Initiative. In February 2016, the RTA unveiled a plan to convert 50% of Dubai taxicabs to hybrid vehicles by 2021. The plan forecasts an increase in the number of hybrid taxis to 2,375 vehicles by 2018; 3,167 vehicles by 2019; 3,959 vehicles by 2020; and up to 4,750 vehicles by 2021.¹⁰² In September 2017, the RTA announced it would procure 554 environment-friendly hybrid vehicles. In December 2017, RTA added the first hydrogen fuel-cell electric vehicle (Toyota Mirai) as part of the Dubai Taxi fleet.¹⁰³ The hydrogen fuel cell vehicle has zero emissions, is noiseless, and can travel 500 km on a full tank.

Leveling the Playing Field

Dubai law requires that, when concluding a Franchise Agreement, the PTA must ensure fair competition among companies.¹⁰⁴ TNCs may hire only RTA-licensed taxi drivers and must align their fares to RTA-established taxi rates (tariffs). This is meant to prevent what is seen as unfair competition from TNCs, such as Dubai-based Careem. RTA Dubai has partnered with ride-hailing services to improve transportation offerings in the emirate, for example by having Careem include all taxis on its platform, making Dubai’s entire taxi sector available on one platform.

Helsinki, Finland

Estimated population: 629,512 (2018).

¹⁰¹ Dubai Roads and Transport Authority, *Public Transport*, www.rta.ae/wps/portal/rta/ae/public-transport/dubaitaxi.

¹⁰² Dubai Taxi, *RTA Awards Contract for Procuring 554 Hybrid Taxis*, Aug. 26, 2017, www.dubaitaxi.ae/news_details_hybrid_taxi.html.

¹⁰³ Dubai Taxi, *RTA Starts Trial Run Of The Region’s First Hydrogen Fuel-Cell Electric Vehicle In Dubai Taxi Fleet*, Dec. 21, 2017, www.dubaitaxi.ae/newsHydrogen.html.

¹⁰⁴ Art. 4, Executive Council Resolution No. 6 of 2016.

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

Finland is the first country in the world to enact laws integrating modes of transportation, which enables new, user-oriented transport services. In July 2018, the Finnish Ministry of Transport and Communications enacted the Act on Transport Services (the “Act”), which is aimed at ensuring the availability of customer-oriented, smooth and multimodal transport services, promoting competition on the passenger transportation market, and improving the competition among service providers in Finland and on the international level.¹⁰⁵ The Act is based on Mobility as a Service (“MaaS”) and creates preconditions for digitalization, new business models, and new kinds of services in transport. Through the reforms, customers are offered a package of services where city bikes, public transport, car rental, and taxis all available under a single MaaS platform.

The Act requires mobility service providers to make essential data public for service development.¹⁰⁶ Essential data includes information on routes, stops, timetables, prices, availability and accessibility. Mobility service providers are also required to provide open interfaces to their apps to enable customers to purchase tickets and pay for services across platforms.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

Before the reforms, accessible vehicles were classified as taxis for the disabled and accessible taxis, of which there were a combined total of 2,911 accessible vehicles on the roads at the end of 2017.¹⁰⁷ After the reforms, there were over 3,200 accessible vehicles being used for taxi services at the end of 2018.

Expanding Economic Opportunities & Fostering Innovation

According to the Finnish Ministry of Transport and Communications, the “objective of the reform is to increase the supply of taxi services since prior to the reform, the number of taxi operators had decreased year after year.”¹⁰⁸

The reforms are cognizant that regulations must not prevent development of new service models or their entry into the market.

As of July 2018, regulations on taxi trip pricing were abolished, allowing taxi operators to determine their fares freely based on factors such as the time of day, method of booking, and additional service requests. Under the reforms, taxis are no longer bound to a particular geographical area, municipality-specific quotas, or standby obligations. According to preliminary data from a survey of the taxi sector, “one third of taxi drivers in medium and large cities have indeed expanded their area of operations. In total, around one fifth of growth taxi entrepreneurs and taxi drivers have expanded their operating

¹⁰⁵ Ministry of Transport and Communications, *Finnish Views on Transport White Paper*.

¹⁰⁶ Finnish Transport and Communication Agency, *Transport Licenses*, www.trafi.fi/en/road/commercial_transport/transport_licences

¹⁰⁷ Finnish Transport and Communication Agency, *Taxi Services Reform Increases Number of Taxis – Largest Increases In Uusimaa, Lapland and Southwest Finland*, Feb. 1, 2019, www.traficom.fi/en/news/taxi-services-reform-increases-number-taxis-largest-increases-uusimaa-lapland-and-southwest

¹⁰⁸ Finnish Ministry of Transport and Communications, *Taxi Reform Prepared In Broad and Open Cooperation* Press Release, April 16, 2019, www.lvm.fi/en/-/taxi-reform-prepared-in-broad-and-open-cooperation-1005319.

area.”¹⁰⁹ By the end of 2018, the number of registered vehicles providing taxi and TNC service increased by 25%, from 9,600 to 12,200.¹¹⁰

The reforms better integrate taxi services into Finland’s transportation options and opened the taxi market, removing quotas set by the authorities, geographic restrictions, and maximum prices. Now, taxi entrepreneurs are free to enter and leave the market and to operate anywhere in the country.

Leveling the Playing Field

The taxi reforms opened the industry to TNCs, effectively eliminating the distinction between the services and providing a framework for TNCs to operate legally in the country the same as taxis.

Houston, Texas

Estimated population: 2.313 million (2017).

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

In Texas, TNC companies and drivers have been regulated by the State since 2017,¹¹¹ while taxicabs, limousines, and other for-hire vehicles continue to be regulated by local municipalities.¹¹² The City of Houston Administration and Regulatory Affairs Department (“ARA”), Vehicle For Hire Permitting and Enforcement Section is responsible for issuing licenses and permits for the operators and drivers of for-hire vehicles, including taxicabs, limousines, private school vehicles, scheduled ground transportation, charter sightseeing vehicles, pedicabs, and low-speed shuttles.

Houston taxicabs operate on a permit system that caps the number of permits that may be issued.¹¹³ As of 2014, there were 143 licensed taxi companies and 2,480 taxicab permits. For the purpose of distribution, 5% of available permits are reserved for new entrant applicants.

On May 29, 2017, Texas enacted uniform statewide rules for TNC companies and drivers. The law preempted local regulation except at airports. The Houston Airport System (HAS) requires an airport permit to pick up riders at George Bush Intercontinental Airport (IAH) and the regional airport, William P. Hobby Airport (HOU). There is no charge for the permit.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

In October 2015, the Houston City Council mandated accessibility requirements for certain vehicles for-hire. All taxicabs, limousines, charter/sightseeing, jitney, Mobile Dispatch Service must now comply with the accessibility ordinance set forth in the City of Houston Code of Ordinances §46-2.1.¹¹⁴ If the Director of the ARA determines that the number of wheelchair accessible taxicabs is less than 2% of the entire

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ Tex. Occ. Code Title 14, Subtit. C, Ch. 2402.

¹¹² Tex. Loc. Gov’t Code § 215.004.

¹¹³ Houston Code § 46-63.

¹¹⁴ City of Houston Code of Ordinances, Ch. 46, Article X (Ord. No. 2015-998), <https://www.houstontx.gov/ara/chapter46/AccessibilityRequirements.pdf>.

taxicab fleet, then all available vehicle permits in that allotment will be designated for wheelchair accessible vehicles.

Reducing Traffic Congestion; Emissions Reductions

To mitigate traffic, the City of Houston has designated streets where the stopping, standing, or parking of vehicles would create an especially hazardous condition or would cause unusual delay to traffic.¹¹⁵ However, the city has placed “Hailing Cab” icon signs on 30 downtown streets to mark that particular site as a three-minute zone where taxis can briefly stop to pick up and drop off passengers.¹¹⁶ In addition, there are more than 21 cabstand locations on streets around downtown Houston where drivers can “stand” and wait for a fare.¹¹⁷ The cabstands are located at or near entrances to major hotels and passenger depots, such as bus depots, passenger train depots, and the local airports.

Figure A3: Hailing Cab Icon



Source 3: Houston ARA

Expanding Economic Opportunities & Fostering Innovation

The rates of fare that taxis may charge for trips are established in the City Code. Lower rates than the posted meter rates can be charged if a trip is dispatched via a mobile dispatch service.¹¹⁸ In February 2019, the ARA issued formal clarification that “[t]he meter rate acts as a **maximum** that can be charged to customers, and drivers will not be penalized for charging less than the posted meter rates” (emphasis in original).¹¹⁹

Houston established a flat \$6 rate for taxi trips entirely within the central business district.¹²⁰ As part of the “Six in the City” program, Houston doubled the number of cab stands in the downtown area to make it easier to get a cab.¹²¹ Six in the City does not apply when rides booked online.

In November 2016, the City of Houston reached an agreement with Uber (at the time, TNCs were within the City’s jurisdiction) to make process-improvement changes to the City’s vehicle-for-hire regulations.

¹¹⁵ Houston Code § 45-119.

¹¹⁶ Houston Code § 46-9.5.

¹¹⁷ Houston Code § 45-130.

¹¹⁸ Houston Code § 46-31.

¹¹⁹ Administration And Regulatory Affairs Department, *Taxicab Meter Rates*, Policy No. VFH – 016 (eff. Feb. 5, 2019), available at www.houstontx.gov/ara/vfh/chapter46/VFH-016_Taxicab_Meter_Rates.pdf.

¹²⁰ Houston Code § 46-31(a)(9).

¹²¹ City of Houston, *Six in the City*, www.houstontx.gov/downtowncab/.

The streamlined changes reduced licensing costs from nearly \$200 to \$70, cut the licensing process in half, and allowed drivers to be licensed in less than 20 minutes.¹²²

Leveling the Playing Field

Houston regulations require, as a condition of permitting, that taxi companies have, within the preceding period of ten years, at least five years active and practical taxicab business experience, with at least two of those years in Houston.¹²³ The ARA recognized that, “with the entrance of TNCs into the local market, the requirements for experience and local knowledge have become barriers to entry rather than opportunities for enhancement of the customer experience” and suspended enforcing the so-called “10/5/2 Rule” in February 2019.¹²⁴

Kansas City, Missouri

Estimated population: 488,943 (2017).

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

Kansas City, Missouri is served by a variety of transportation services, but the city relies heavily on the private vehicles. According to the 2011-2015 American Community Service, 80% of people in Kansas City drive to work alone, 9% carpool, 3% use public transit, and 2.5% either walk or bike to work. Only 11% of Kansas City households do not have access to a private vehicle and 41% of households have access to only one vehicle.

The City of Kansas City Regulated Industries Division of the Department of Neighborhood & Housing Services is responsible for regulating vehicle-for-hire vehicles, drivers, and companies that provide taxicab, livery, pedicab, and horse-drawn carriage service.¹²⁵ This includes more than 500 taxicab vehicles, 200 livery vehicles, two dozen horse-drawn carriages, and a handful of pedicab vehicles. Taxicabs operate on an open market permit system, allowing companies to enter and leave the market as they wish, provided they meet minimum criteria.

Expanding Economic Opportunities & Fostering Innovation

In August 2017, Missouri enacted statewide laws regulating TNCs.¹²⁶ The TNC law imposes lighter regulations than Kansas City’s ordinance governing for-hire businesses and taxis. As a result, most of the Kansas City taxi companies pivoted to take advantage of the statewide TNC regulations by shifting their fleets to provide TNC service and several formed their own TNC called “zTrip,” which accepts bookings via app or phone and allows passengers to pay with credit card or cash.¹²⁷ At the time, Kansas City’s

¹²² City of Houston, Office of the Mayor, Press Release, *Mayor Turner Announces Agreement with Uber to Remain in Houston*, Nov 16, 2016, www.houstontx.gov/mayor/press/agreement-with-uber.html.

¹²³ Houston Code § 46-65(a)(7).

¹²⁴ Administration And Regulatory Affairs Department, *Taxicab Permit Eligibility Requirements – the “10/5/2 Rule”*, Policy No. VFH – 015 (Feb. 2, 2019), available at www.houstontx.gov/ara/vfh/chapter46/VFH-015_10_5_2_Rule.pdf.

¹²⁵ Business Vehicle Licenses and Forms, available at <http://kcmo.gov/neighborhoods/regulated-industries-2/business-vehicles-2/>.

¹²⁶ Mo. Rev. Stat., Ch. 387, §§ 400-440.

¹²⁷ Scott Canon, “Most Kansas City Taxis to Operate Like Uber and Lyft In Wake of New State Law,” *Kansas City Star*, April 25, 2017, <https://www.kansascity.com/news/business/technology/article146776314.html>.

dominant taxi business said that it would continue to operate only 40 or 50 of its 450 vehicles as traditional taxis so that those vehicles could pick up passengers hailing rides from the curb at Kansas City International Airport.

State law preempts local regulation of TNCs and other ridesourcing services.¹²⁸ However, for the sole purpose of verifying that a TNC is in compliance with the state law, Home Rule cities with more than 400,000 inhabitants (Kansas City and St. Louis), may inspect up to ten records that TNCs are required to maintain.¹²⁹ These records inspections are limited to twice yearly, and cities can charge up to \$5,000 to cover the cost of reviewing the records.

London, England

Estimated population: 9.046 million (2018).

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

In London, Transportation for London (“TfL”) regulates taxicabs and private hire vehicles (“PHVs”), including TNCs, operating in London. The TfL is also responsible for various train networks as well as London’s trams, buses, and river services. London has 20,599 licensed taxi drivers, 20,519 licensed taxi vehicles, 109,042 licensed private hire drivers, 85,576 licensed private-hire vehicles, and 2,315 licensed private-hire operators as of September 2018.

London taxi drivers are licensed and must have passed an extensive training course (the “Knowledge”). London does not cap the number of taxicab drivers or vehicles. The vehicles themselves are specially constructed and designed to conform to TfL standards set out in the Conditions of Fitness.

Any person or entity that provides for accepting private hire bookings, or accepts private hire bookings, in London must hold of a PHV operator’s license. The TfL has a lengthy and extensive PHV licensing process that can take up to one year to complete.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

By law, all licensed taxis are wheelchair accessible, and taxi drivers are obliged to take wheelchair users. Many cabs have additional features to make access and travelling easier, such as grab handles, swivel seats, induction loops and intercoms. Most PHVs do not have step-free access.

The “Taxicard” program provides subsidized taxi and private hire travel for those who are unable, or find it very difficult, to travel independently. Around 1.9 million trips were taken in the 2010-11 financial year.¹³⁰ Taxicard is provided by participating London boroughs who contribute around one third of the funding. Annual levels of entitlement subsidies are determined by the member’s local borough. No

¹²⁸ Mo. Rev. Stat. § 387.430.

¹²⁹ Mo. Rev. Stat. § 387.440.

¹³⁰ See Transport for London, *Taking forward the Mayor’s Transport Strategy Accessibility Implementation Plan*, December 2012, available at content.tfl.gov.uk/taking-forward-the-mts-accessibility-implementation-plan-march-2012.pdf.

special booking process is required, but a dedicated phone number and website are available for members.

Equitable Access

The “Capital Call” program uses PHVs to supplement the Taxicard program in areas of London where traditional black cabs are less widely available. Capital Call members receive a fixed annual budget. Members pay a flat fare depending on trip value, and the rest is taken from the annual budget.

Reducing Traffic Congestion; Emissions Reductions

As part of initiatives to help support the taxi trade, London expanded taxis’ use of bus lanes.¹³¹

In London, the city requires that new taxis not previously licensed emit no more than 50g/km and a minimum 30-mile zero emission range. The City of London also supports the adoption of zero-emission taxis through government plug-in vehicle grants which give taxi drivers up to £3,500 (approximately \$4,500) off the price of a new vehicle. The United Kingdom also offers grants to install charging infrastructure at home. While recharging electric taxis may be less costly than refueling, the time and potential fare revenue lost to charging time should not be underestimated. As such, policies that expand fast charging infrastructure for taxi fleets are key. For example, the City of London is installing fast charging stations across the city with a number of charging points reserved for taxis only.

London and TfL have committed to establishing London’s fleet as the greenest in the world, supporting plans for a zero-carbon city by 2050 with the following initiatives:¹³²

- Reward drivers who pioneer green technology by offering exclusive access to certain facilities, for example, ‘zero emission’ ranks, and working with boroughs to explore areas where taxis and other vehicles must operate in zero emission mode
- Since January 1, 2018, all new taxis must be Zero Emission Capable (“ZEC”)
- Installation of rapid charging points across the city, with taxi-dedicated locations;
- In July 2017, TfL set up a £42m fund to help taxi drivers replace the oldest, most polluting diesel cabs and to buy ZEC vehicles

The London Mayor’s Air Quality Strategy, published in December 2010, included the following taxi initiatives and guidelines, which TfL has implemented:¹³³

- Changed the taxi licensing regime from one combined mechanical and licensing inspection to two MOTs per year with a basic annual taxi-related inspection by TfL
- Taxis more than 15 years old will not be licensed
- All new taxis must meet the Euro 5 standard
- Work with taxi manufacturers to develop an affordable taxi with 60% better fuel economy by 2015 and zero emission by 2020
- Financial incentive scheme for drivers purchasing new taxis that meet certain requirements

¹³¹ Mayor of London, *Taxi and Private Hire Action Plan 2016*, September 2016, available at content.tfl.gov.uk/taxi-and-private-hire-action-plan-2016.pdf.

¹³² Transport for London, *Annual Report and Statement of Accounts: 2017/18*, July 2018, content.tfl.gov.uk/tfl-annual-report-and-statement-of-accounts-2017-18.pdf.

¹³³ Transport for London, *The Mayor’s Air Quality Strategy (Guidance)*, December 2010, available at content.tfl.gov.uk/mayors-air-quality-strategy.pdf.

- Introduce additional taxi ranks and suspend stopping and waiting restrictions to reduce idling and empty running by taxis
- Support the development of new technologies that encourage taxi sharing and enable electronic hailing
- Require all new taxi drivers must undertake a mandatory eco-driving course before becoming licensed and encourage existing drivers to take such courses
- Work with the taxi manufacturing industry to identify and mandate tire and brake pads that will reduce PM10 emissions

Private hire vehicle initiatives include introducing age limits for PHVs with a 10-year rolling age limit for vehicles being relicensed from 2012 onwards, requiring all newly licensed PHVs must meet the Euro 4 standards as a minimum and be no older than five years, and working with the private hire industry to introduce eco-driving training and to promote efficient driving techniques to reduce emissions.

Expanding Economic Opportunities & Fostering Innovation

TfL has established a process to obtain TfL approval to install aftermarket equipment and/or modify existing equipment in licensed taxis and PHVs that allow for operators to engage in advertising campaigns and to test new technology.¹³⁴

The Mayor of London, in conjunction with TfL, developed the following initiatives to help support the taxi trade:¹³⁵

- Mandatory credit card and contactless payment options in taxis
- Delivering the Ranks Action Plan and increasing the number of taxi ranks in London by 20% by 2020 (from 500 to 600), as well as improving accessibility at ranks, and improving and promoting ranks
- Raising the profile of “The Knowledge” by establishing accreditation as a formal qualification, potentially enabling applicants to apply for study loans
- Giving taxi drivers better access to TfL facilities, such as restrooms
- Reviewing the annual taxi fares process to ensure drivers and customers get the best deal

Leveling the Playing Field

The TfL has limited license periods for TNCs and requires initial regulations just to obtain a license. For instance, Via and Uber have a one-year license, instead of a five-year license. London is ensuring that the city is safe while leveling the playing field for others to join.

New York City

Estimated population: 8.623 million (2017).

¹³⁴ Transport for London, Approval Process for the Installation of Additional Equipment/Modifications into Licensed London Taxis & Private Hire Vehicles (PHV), April 2011, available at content.tfl.gov.uk/additional-equipment-in-taxis-and-private-hire-vehicles-2015.pdf.

¹³⁵ Mayor of London, *Taxi and Private Hire Action Plan 2016*, September 2016, available at content.tfl.gov.uk/taxi-and-private-hire-action-plan-2016.pdf.

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

In New York City, the Taxi & Limousine Commission (TLC) is responsible for regulating for-hire vehicle service in the City, including taxicabs, black cars, liveries, paratransit, and TNCs. In New York City, taxis operate on a medallion system, while other types of for-hire vehicles must obtain permits.

The for-hire transportation in New York City includes about 150,000 drivers licensed by the TLC completing approximately 1,000,000 trips each day. Approximately 121,840 vehicles are licensed by the TLC to serve the public, 13,587 of which are medallion taxicabs. The number of medallions is set by state law. In addition to medallion taxicabs, approximately 107,000 other vehicles serve the public through pre-arrangement and radio dispatch. The for-hire vehicles category includes livery vehicles, app-based and traditional black car services, TNCs, and luxury limousine services.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

In August 2018, the City of New York enacted legislation that waives the annual licensing fee for any taxicab or for-hire vehicle if the license is used with a Wheelchair Accessible Vehicle (WAV).¹³⁶ The licensing fee waiver applies to new and renewal licenses. Specifically, the following fee will be waived if a WAV is used: \$550 Yellow Taxicab annual license fee; \$275 FHV's annual vehicle license fee. All other applicable fees, including vehicle inspection and commercial motor vehicle tax (CMVT) must still be paid.

All taxi trips are assessed a \$0.30 improvement surcharge to fund accessible taxis. The **Taxi Improvement Fund ("TIF")** supports medallion owners and drivers who put accessible vehicles on the road. Owners or agents are eligible to receive a one-time payment of \$14,000 to offset purchase costs of a WAV, and up to an additional \$4,000 per year for four years as financial assistance for owning and using a WAV vehicle (up to \$30,000 total over four years).¹³⁷ Drivers are eligible to receive TIF payments of \$1.00 per trip completed in a wheelchair accessible vehicle, even if the passenger is not a wheelchair user.¹³⁸

The TLC has partnered with Medical Transportation Management, Inc. to provide the **NYC Accessible Dispatch Program** that provides wheelchair accessible yellow and green taxi service originating anywhere in the five boroughs and ending in the five boroughs or neighboring New York counties.¹³⁹ Passengers may request a wheelchair accessible taxi by using the Accessible Dispatch mobile app, booking online, or calling 311 or a dispatch center directly. Passengers pay the metered taxi fare. Drivers can earn a dispatch fee payment of up to \$30 for traveling to the passenger pickup in addition to the \$1.00 TIF fee payment.

In 2017 and 2018, the TLC passed rules to increase the availability of wheelchair accessible vehicles in the for-hire vehicle industry. As of January 14, 2019, the rules require each FHV base to either dispatch

¹³⁶ NYC Admin. Code § 19-504(b).

¹³⁷ N.Y.C. Taxi and Limousine Commission, *Taxi Improvement Fund Owner Program*, www1.nyc.gov/site/tlc/about/tif-owner-program.page.

¹³⁸ N.Y.C. Taxi and Limousine Commission, *Drivers of Wheelchair Accessible Vehicles*, www1.nyc.gov/site/tlc/about/tif-drivers.page.

¹³⁹ accessibledispatch.org/

a minimum percentage of its annual trips, increasing each year, to wheelchair accessible vehicles—the **Trip Mandate Rule**¹⁴⁰—or work with an approved Accessible Vehicle Dispatcher to service WAV trips within certain wait time limits—the **Central Dispatch Exception**.¹⁴¹ Bases that opt to meet the accessibility mandate themselves, will be required to dispatch at least 5% of trips every year to an accessible vehicles starting July 1, 2018, increasing to 25% in 2022. Accessible Vehicle Dispatch providers that service requests on behalf of bases will be required to fulfill at least 60% of such requests within 15 minutes during the first year, increasing to 90% in 2022. All FHV bases must meet requests for accessible vehicles, regardless of which option they choose. These rules do not require that bases affiliate a certain number of accessible vehicles.

Equitable Access

The TLC rules prohibit refusing to transport passengers to destinations within one of the five boroughs, the neighboring New York counties of Nassau or Westchester, or Newark Liberty Airport without justification and bar drivers from even attempting to determine a passenger’s destination before the passenger is seated inside the vehicle.¹⁴² The penalties for refusal of service violations range from \$350–\$500 for the first violation to \$750–\$1,000 and revocation of license for a third violation within 36 months.¹⁴³

The following are justifiable reasons for refusing to transport a passenger:

- Another passenger is already seated in the vehicle.
- The driver has already acknowledged a hail from another person, accepted a dispatch call for a pre-arranged trip, or accepted an e-hail trip.
- The passenger has any item the driver reasonably believes will damage the vehicle. (This does not include wheelchairs, crutches, a service animal, or other mobility aid.)
- The passenger has a non-service animal that is not properly secured in a suitable container.
- The driver is ending their shift or taking the vehicle out of service for repairs and has already entered the appropriate off duty code in the technology system.
- The passenger’s destination is Newark Airport or someplace in Nassau or Westchester County, and the driver has been on duty for more than eight hours of any continuous 24-hour period.
- The passenger is disorderly or intoxicated. (caution: drivers must not refuse to provide service solely because a disability results in annoying, offensive, or inconvenient behavior.)
- The passenger has refused the driver’s request to stop smoking.

To address the lack of yellow cabs outside Manhattan, the city created a separate category of for-hire vehicle that is allowed to accept street hails in the outer boroughs. Street Hail Liveries—also called green taxis and “borough cabs”—are allowed to pick-up street hails anywhere in NYC except at the airports or south of West 110th St and East 96th in Manhattan.¹⁴⁴ Like yellow taxis, green taxis may not ask a passenger’s destination or refuse to transport passengers anywhere within NYC or the surrounding

¹⁴⁰ See 35 R.C.N.Y. § 59B-17(c)(1).

¹⁴¹ See 35 R.C.N.Y. § 59B-17(f).

¹⁴² See 35 RCNY § 80-20(a).

¹⁴³ See 35 RCNY § 80-02.

¹⁴⁴ The Hail Exclusionary Zone is south of West 110th St and East 96th St in Manhattan.

counties. Green taxis are outfitted with the same equipment as yellow taxis (*e.g.*, roof light, meter) and are all a distinctive shade of Apple Green.¹⁴⁵

Reducing Traffic Congestion; Emissions Reductions

Curb Management: The NYC code allows FHVs and taxis to stop in “no parking” or “no standing zones” to pick up or drop off passengers and to double park if there is no curb space available, provided they do not block traffic flow, pedestrian crosswalks, intersections, bicycle lanes, bus lanes, or horse-drawn carriage boarding areas.

Vehicle Cap: The total number of taxi cab medallions is capped by state law at 13,587. In August 2018, the City implemented a one-year ban on issuing any new for-hire vehicle licenses—TNCs, black cars, limos—unless the vehicle is wheelchair accessible, while regulators examine the impact of for-hire vehicles on, among other things, traffic congestion.¹⁴⁶ Legislation also empowered the TLC to set vehicle utilization standards.¹⁴⁷

Congestion Surcharge: In April 2018, New York State enacted a congestion surcharge on taxi and for-hire vehicle trips that start, end, or travel through Manhattan south of 96th street to fund the city’s subway system.¹⁴⁸ Collections began February 2, 2019, and riders have been charged \$2.50 per taxi trip, \$2.75 per FHV trip, and \$0.50 per pooled vehicle passenger.

Congestion Pricing: In April 2019, New York State enacted legislation establishing a congestion toll program that will charge motorists to enter Manhattan south of 60th street, beginning in early 2021.¹⁴⁹ The amount of the toll and other details of the program will not be determined until sometime around November 2020. Revenues will be used to fund the city’s subway and commuter rail systems.

Openness/Flexibility for New Technology

The TLC uses pilot programs to test new technology. In 2013, New York City Mayor Bloomberg established a goal to have one third of the city’s taxis electric by 2020. In 2013 the Taxi and Limousine Commission launched the Electric Vehicle Pilot (“EVP”) program to test whether electric taxicabs could replace traditional ones without adversely affecting customer service. The pilot ran from April 2013 to March 2015. The pilot documented a reduction in service by pilot vehicles (15.5 trips per shift versus an industry-wide average of 20). The pilot identified the following key challenges:

- **Lack of Charging Infrastructure:** The pilot concluded that Level III charging infrastructure was essential for taxis to operate in the city when vehicle range is not sufficient to get a driver through a shift.
- **Range Anxiety:** Because of limited battery potential, drivers displayed driving range anxiety and were unwilling to travel long distances when the battery was at a lower charge. Drivers in the pilot were permitted to refuse some passengers traveling longer distances if the battery life was insufficient to complete the trip. They periodically did so, and like most other taxi drivers, they

¹⁴⁵ 35 RCNY § 82-52 requires all SHLs be painted Apple Green (paint codes Dupont – GS028 or PPG – 502757 or similar).

¹⁴⁶ See N.Y.C. Local Law No. 147 of 2018 (eff. 8/14/2018).

¹⁴⁷ See N.Y.C Admin. Code § 19-55 (L.L. 2018/147, 8/14/2018).

¹⁴⁸ See N.Y. Tax Law Article 29-C.

¹⁴⁹ Enacted new Vehicle and Traffic Law Article 44-C.

preferred shorter rides within Manhattan. If a trip to another borough was accepted, the driver preferred to return directly to Manhattan rather than search for another passenger in another borough. The pilot emphasized that vehicles with greater range or gasoline-powered range extender may prove useful for taxis to maintain high service standards.

- **Weather Sensitivity:** Drivers found that using their HVAC system decreased vehicle range. The pilot concluded that a greater vehicle range or gas backup system would eliminate this concern.
- **Lack of Customer Service Support:** The pilot documented several incidents of malfunctioning chargers highlighting the lack of customer service alerts about chargers and the need for robust charging infrastructure. For a shift to electric vehicles to succeed, redundancy and robust charging capacity for EV fleets is essential.

The pilot generally concluded that the lack of public charging infrastructure and the additional costs of home charging would present a notable barrier to broader electrification of the taxi fleet. It is important to note, however, that the average New York taxi drives around 115 miles per 12-hour shift which could be lower considering the comparatively lower density built environment in Los Angeles which may result in longer taxi trips.

Leveling the Playing Field

In 2015, the TLC launched the Taxicab Leasing Pilot that gives participants the opportunity to tailor vehicle leasing models to the needs of their business, allowing for more flexibility in adjusting rates and driver shifts similar to other for-hire vehicles.¹⁵⁰

In a study conducted by the Office of the Mayor of NYC in 2016 it was recommended that New York level the playing field among yellow taxis, green taxis, and TNCs, with differences in regulations or standards driven by policy goals: a quality passenger experience; new income opportunities and good jobs; cultivating a competitive and innovative market in for-hire service; ensuring accessible for-hire transportation options; safe and efficient streets; and maintaining a regulatory structure with integrity.¹⁵¹

In June 2018, the TLC launched the Flexible Fare Pilot program that allows yellow and green taxis to offer upfront, binding unmetered fares quotes to passengers who request a trip through an E-Hail app. The pilot allows drivers to accept unmetered fares when a request is made through an approved E-Hail pilot participant. It is intended that the taxi industry will leverage smartphone apps to take advantage of the same flexibility in the FHV industry. TLC plans to use the data collected from the two-year pilot to determine effects on driver income and passenger engagement.¹⁵²

Seattle, Washington

Estimated population: 724,745 (2017)

¹⁵⁰ N.Y.C. Taxi and Limousine Commission, *Taxicab Leasing Resolution*, October 15, 2015 (amended December 3, 2015), available at www.nyc.gov/html/tlc/downloads/pdf/taxicab_leasing_resolution.pdf.

¹⁵¹ N.Y.C. Office of the Mayor, *For-Hire Vehicle Transportation Study*, January 2016.

¹⁵² N.Y.C. Taxi and Limousine Commission, *Flex Fare Resolution*, March 29, 2018, available at www.nyc.gov/html/tlc/downloads/pdf/flex_fare_resolution_03_29.pdf.

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

In Washington State, regulation of passenger transportation service provided by taxis and other for-hire vehicles is delegated to local authorities.¹⁵³ State law is unclear on who has regulatory authority for TNC operations, and many counties, cities, and airports—including Seattle and King County—regulate these services through local ordinance or operating agreements.

Seattle and King County have an inter-local agreement to regulate the for-hire industry, including taxis and TNCs, countywide. The County performs the licensing of taxi and for-hire drivers and companies working in Seattle, and the City performs all vehicle-related licensing. Licensing of TNC drivers and vehicles is consolidated into a combined license application process conducted by King County, and vehicle inspections are supported via Seattle’s central database and an approval process for certified mechanics.¹⁵⁴

King County also has an inter-local agreement with 16 other cities and the Port of Seattle, including the Seattle-Tacoma International Airport, to provide licensing services on their behalf, using the Seattle partnership for vehicle licensing.¹⁵⁵ Under the ILAs, the participating cities agree to adopt King County’s business licenses and regulations in substantially similar form or by reference. Some of the cities maintain certain power. For example, Seattle and Redmond require companies obtain a city business license.

The regulatory agency in Seattle is the Department of Finance and Administrative Services. Taxis operate on a medallion system, are capped at 1,500, and are awarded via periodic lottery. The initial award of a medallion does not cost the taxi operator anything. The value of the medallion is realized when it is transferred or sold to a new owner. The average sale price of dual Seattle-King County medallions in 2017 was \$35,700, down from over \$200,000 in 2013.¹⁵⁶

The number of medallions is set by regulation. The number is determined based on the average response time, total number of revenue trips and average operating hours are compared against those of the baseline year (2005-2006). If there is significant deviation from the baseline, the municipal code empowers the regulator to issue up to 35 additional licenses per year. Taxis must be licensed and affiliated with a single licensed taxi association. Medallions can be obtained by purchase, lease, transfer, or lottery.

¹⁵³ Wash. Rev. Code Ann. §§ 46.46.72, 81.81.72

¹⁵⁴ King County Code Title 6.64 – Business Licenses and Regulations.

¹⁵⁵ Washington State Joint Transportation Committee, Regulation of Transportation Network Companies: Policy Guide, January 2019, available at leg.wa.gov/JTC/Documents/Final%20Studies/TNC_PolicyGuideFinal.pdf.

¹⁵⁶ State of Washington, Joint Transportation Committee, *Request for Proposals for Regulation of Taxi and For-Hire Services in Washington State* (Apr. 12, 2018), available at leg.wa.gov/JTC/Documents/RFPs/RFP_TAXI_FINAL.pdf; GeekWire, *The Uber effect: Seattle taxi industry revenue dipped 28% in past 2 years*, June 11, 2015, www.geekwire.com/2015/the-uber-effect-seattle-taxi-industry-revenue-dipped-28-in-pasttwo-years/.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

Seattle regulations establish a \$0.10 per ride surcharge on all taxi, for-hire vehicle, and TNC trips that begin in the city that is used to offset the higher operational costs of wheelchair accessible taxi (“WAT”) services for owners and operators.¹⁵⁷

The Director of the Department of Finance and Administrative Services has the power and discretion to issue WAT or wheelchair accessible for-hire vehicle licenses, not subject to the vehicle cap.¹⁵⁸

Additionally, the Director may issue City of Seattle wheelchair accessible taxicab licenses to applicants selected by King County for issuance of a King County wheelchair accessible taxicab license. If a City of Seattle wheelchair accessible taxicab license is awarded to a King County wheelchair accessible taxicab, then a dual license is created, allowing the licensee to operate in both the City and County. The dual status of the licenses is permanent, and the licenses must be transferred or leased together. These licenses are non-transferable for three years from the date of issuance.

The city also requires that TNCs provide an option for customers to request a WAT.¹⁵⁹

Reducing Traffic Congestion; Emissions Reductions

Vehicle Cap: Seattle caps the total number of taxicab licenses in effect at any one time at 1,050.¹⁶⁰ The Director has the power and discretion to set the number of taxicab licenses at such times and in such manner as necessary to meet the demand for efficient and economical taxicab service within the city limits and to support a competitive, safe, fair and viable business environment for the taxicab industry. However, no more than 100 licenses can be issued within a calendar year.

The Seattle Code bars TNC and non-taxi drivers from soliciting passengers, cruising for passengers, or picking up passengers in a taxi zone.¹⁶¹

Curb Management: City code curb color program delineates parking, loading, and standing regulations, and is supplemented by signage. Bus stops are also designated by curb color. Seattle has three-minute passenger loading zones, designated by white curbs and signage, located throughout the city for brief stops to pick up and drop off passengers.

Leveling the Playing Field

Taxis may operate on an approved app dispatch system. Trips booked through the app are not subject to the metered fare rates that regularly apply to taxis.¹⁶² However, e-hail systems are subject to the

¹⁵⁷ Seattle Municipal Code § 6.310.175 (Ord. 124524, § 9, 2014).

¹⁵⁸ Seattle Municipal Code § 6.310.500(C).

¹⁵⁹ Department of Finance and Administrative Services, FAS Seattle Regulations, *Transportation Network Company Endorsed Vehicle Information: Overview of Key Provisions for Operating in Seattle*, June 14, 2018 available at www.seattle.gov/Documents/Departments/FAS/RegulatoryServices/information-sheet-tnc.pdf.

¹⁶⁰ Seattle Municipal Code § 6.310.500.

¹⁶¹ See Seattle Municipal Code § 6.310.470(C).

¹⁶² See Seattle Municipal Code § 6.310.530(A)(3).

same requirements, including fare transparency, as those used by TNCs, and include the same rate flexibility.

Washington, D.C.

Estimated population: 702,455 (2018).

Overview of Taxicab and For-Hire Vehicle Regulatory Framework

In the District of Columbia (“D.C.” or “District”), the Department of For-Hire Vehicles (“Department” or “DFHV”) is responsible for regulation and licensing of for-hire vehicles operating in the District.¹⁶³ The For-Hire Vehicle Advisory Council (“FHVAC”) advises the DFHV on all matters related to the regulation of the vehicle-for-hire industry. The Department’s mission is to protect public interest by regulating the vehicle-for-hire industry to allow the citizens and visitors of the District of Columbia to have safe, affordable, and accessible transportation options. The Department has jurisdiction over taxis, limousines, black cars, and other for-hire vehicles, including TNCs.

Under the current regulatory framework, vehicle for-hire (“VFH”) service is either public or private. Taxicabs, limousines, and black cars are classified a “public vehicle for-hire,” while TNCs are classified as a “private sedan service” or, alternatively, “private vehicle-for-hire company.”¹⁶⁴ Although there are similarities between the services, public and private for-hire vehicles operate under separate rules and regulations that govern how they connect to passengers and how they calculate fares.

The D.C. Code requires the DFHV license drivers, vehicles, and business providing any class of public vehicle-for-hire service within the District.¹⁶⁵ Anyone wishing to operate a taxicab company, association, or fleet in the District must obtain and annually renew a Certificate of Operating Authority license from the DFHV.¹⁶⁶

The DFHV is further authorized by statute to use a \$0.25 per trip surcharge, in part, to fund a grant program for taxi and other licensed for-hire vehicle owners.¹⁶⁷ The money from the passenger surcharge may be used to provide grants, loans, incentives, or other financial assistance to owners and operators to:

- offset the cost of acquiring, maintaining, and operating wheelchair-accessible vehicles
- incentivize the purchase and use of alternative-fuel vehicles
- incentivize directing vehicles-for-hire to underserved areas
- offset costs associated with meeting regulatory requires
- establish a program to provide a taxicab fare discount for low-income senior citizens aged 65 years and older and persons with disabilities

¹⁶³ District of Columbia Taxicab Commission Establishment Act of 1985 (“Establishment Act”), effective March 25, 1986 (D.C. Law 6-97; D.C. Official Code §§ 50-300 et seq. (2012 Repl. & 2016 Supp.) and title 31 of the District of Columbia Municipal Regulations (“DCMR”).

¹⁶⁴ The term “private sedan” in the D.C. Municipal Regulations is synonymous with the term “private vehicle-for-hire,” as defined in the Establishment Act, D.C. Code Official §§ 50-301 et seq.

¹⁶⁵ D.C. Code § 50-301.19.

¹⁶⁶ 31 DCMR § 501.1.

¹⁶⁷ D.C. Code § 50-301.20.

Improving Transportation Equity & Accessibility

Access for People with Disabilities

Under the **DC Taxicab Service Improvement Amendment Act of 2012**, each taxi and black car company with 20 or more taxicabs in its fleet is required to dedicate at least 20% of its fleet to wheelchair-accessible vehicles by December 31, 2018.¹⁶⁸ In 2018, there were 281 wheelchair accessible taxis (less than 3% of the DC fleet).¹⁶⁹

Transport DC is a 24/7 alternative to paratransit service for MetroAccess customers whose disability prevents them from using bus or rail. Customers receive curb-to-curb taxicab or wheelchair accessible taxicab service. Rides are unrestricted for the first 15 days of the month; during the remainder of the month, customers may only receive rides for employment and medical services. The \$5 per ride fee is waived when the customer chooses to share the ride with another customer heading to a similar destination (limited to 2 customers per ride). Through shared riding, DFHV expects to reduce the out-of-pocket cost to the passengers, be able to deliver more rides within the budget, and increase incentive for drivers to participate in the program.¹⁷⁰

Equitable Access

DFHV partnered with Via and Transco on a microtransit pilot program. **DC Microtransit** is available in parts of Northwest and Northeast DC that are less well served by public transportation and taxis than other areas of the city.¹⁷¹ Passengers can book rides through the DC MicroTransit app or by calling a dispatch number. As part of initial pilot program, riders can travel anywhere within the service zone for free through September 30, 2019. After that, it will cost \$3.00 per ride plus \$1.00 for each additional person in parties of more than one. Credit card payments are accepted via the app and drivers also accept cash payments. Wheelchair accessible vehicles are part of the fleet.

Previous pilot programs included:

- **Transportation as a Service (TaaS)**, which offered the means for mobility to eligible District residents who need transportation to attend school, to get to work, or to make a medical appointment. TaaS is a low-cost transportation program intended to eliminate transportation barriers for veterans and persons with disabilities, as DFHV develops policies and pilot programs to meet consumer needs. The District is building a universal solution for mobility across the city that includes taxis and TNCs.
- **Neighborhood Ride Service by Taxis (NRS)**. In 2016, DFHV launched a competitive grant pilot program for taxi companies to provide fixed-route taxi service in the city's transportation deserts. The program used vans operated by a taxi company to carry multiple passengers at

¹⁶⁸ D.C. Code § 50-301.25(c)(1); 31 DCMR §501.10.

¹⁶⁹ D.C. Department of For-Hire Vehicles, *Quantifying Use and Demand of Wheelchair Accessible Vehicles*, Dec. 2016, available at dfhv.dc.gov/sites/default/files/dc/sites/dc%20taxi/page_content/attachments/WAV%20Executive%20Summary.pdf.

¹⁷⁰ D.C. Department of For-Hire Vehicles, *Performance Plan FY2018*, available at oca.dc.gov/sites/default/files/dc/sites/oca/publication/attachments/DFHV18.pdf.

¹⁷¹ D.C. MicroTransit, dcmicrotransit.com/.

separate fares on routes that could be tailored to meet demand.¹⁷² Trip fare was set at \$3.25 (less than the cost of express bus service). The two-year pilot program concluded that NRS routes would only be economically viable under certain conditions.

In 2018, DFHV began publishing average taxicab trip ratings on a quarterly basis. DFHV began collecting taxicab passenger rating information in FY2017 and this feature has been incorporated into the Digital Taxicab Solution (DTS). At the conclusion of each trip, taxicab passengers are able to rate the trip using a five-star system common in the TNC industry. Quarterly results are published to provide transparency and a point of comparison to riders. Companies and operators are expected to benefit from the insights about industry performance.

Reducing Traffic Congestion; Emissions Reductions

Taxi operators are allowed to use active bus lanes if they are carrying passengers.¹⁷³ Loading and unloading is not allowed in a bus lane. TNCs are prohibited from using bus lanes at any time, even if they are carrying passengers.¹⁷⁴ In the District, lanes painted red are restricted to buses or other authorized users for at least part of the day. As part of a Summer 2019 Bus Lanes Pilot, the District is expanding bus lanes by designating the right curb-side lane of certain streets to operate as a bus lane during the morning and evening peak periods, from 7AM-9:30AM and 4PM-6:30PM on weekdays.¹⁷⁵ The pilot will run until the end of September 2019.

In support of the D.C. Mayor's goal of making the District carbon neutral by 2050, DFHV is supporting the transition of for-hire vehicles to more energy-efficient by introducing new regulations that will increase the service age limit for Electric Vehicles from 8 years to 10. The Department is also adding EVs to its fleet for use as a Vehicle Inspection Officer Vehicle.

Since October 2017, each owner of a licensed taxicab operating in the District is required maintain average vehicle greenhouse gas emissions at a level set by the DFHV in consultation with the D.C. Department of the Environment that will contribute to an overall goal of a 20% reduction in taxicab fleet greenhouse gas emissions by the year 2020.¹⁷⁶ Wheelchair accessible vehicles are exempt from compliance with greenhouse gas emission standards.

Expanding Economic Opportunities & Fostering Innovation

The DFHV invests part of its budget to encourage innovation in the taxi and FHV industry by making grant opportunities available that encourage eligible companies to use funding to test new types of

¹⁷² District of Columbia, Department of For-Hire Vehicles, *Review of Neighborhood Ride Service By Taxicab (NRS) Pilot Program*, June 22, 2017, available at dfhv.dc.gov/sites/default/files/dc/sites/dc%20taxi/page_content/attachments/DFHV%20Review%20-%20Neighborhood%20Ride%20Service%20%28NRS%29%20by%20Taxicab%20Pilot%20Program%20%28June%20017%29.pdf.

¹⁷³ DCMR § 18-2217.5.

¹⁷⁴ A vehicle may enter a designated bus lane within forty feet (40 ft.) of an intersection or driveway, to engage in a turn at that intersection or driveway. See DCMR 18-2217.6.

¹⁷⁵ D.C. Department of Transportation, Summer 2019 Bus Lanes Pilot, files.constantcontact.com/00395100301/d892da47-34ea-4349-bca6-abb4fad300.pdf.

¹⁷⁶ D.C. Code § 50-301.27(a).

service that solve transportation problems for stakeholders and also generate new rides into the FHV industry.

The purpose of grant opportunities is to select one or more For-Hire Vehicle companies, taxicab owners, and operators with current DFHV operating authority to participate in innovative pilot projects and partnership programs aimed at improving transportation equity, expanding economic opportunities, solving problems within the taxicab industry that benefit taxicab consumers, and fostering innovation. Grant opportunities have included:

- **Microtransit/Paratransit/TaaS Pilot Program** to deliver transportation service characterized by any of the following: specific routes, type of vehicles, numbers of passengers, multi-occupancy rides, fixed pickup points, dynamic routes, non-fixed timetables, fixed timetables, subsidized rides, and the booking of trips by voice call, smartphone app, and Web.
- **Dynamic Pricing Pilot Program** that would create and implement a dynamic pricing program, including fare variances according to passenger demand, upfront pricing for passengers, ability to match riders with drivers including drivers who are not part of your fleet, demonstrate how you would use software to connect passengers with similar geographic origins and destinations to a single vehicle.
- **School Transportation Services Pilot Program** (limited to DFHV-licensed taxicab owners) to provide transportation to and from school for children in the care and custody of the D.C. Child and Family Services Agency.
- **Neighborhood Ride Service By Taxis (NRS)** is a fixed-route taxi service operating as a pilot program in certain Wards in the District. Transportation is provided by an 8-seat shuttle. Passengers are picked up and dropped off along routes within each specific Ward. For \$5 or less, riders can hop on or off at stops within their Ward.

Openness/Flexibility for New Technology

In February 2018, D.C. Mayor Muriel Bowser announced new efforts to explore an automated vehicle program. An interagency AV Working Group was created comprised of District agencies focused on transportation, disability rights, environmental issues, and public safety. Additionally, the Administration is partnering with a local Business Improvement District to release a Request for Information (RFI) for an AV pilot program.

Leveling the Playing Field

In D.C., taxicabs are the only class of vehicle that is allowed to accept street hails and pick up passengers from taxi stands. Although taxicabs may also use dispatch services to pick up passengers, all other vehicle classes may only provide pre-arranged service, and TNCs must do so exclusively through an app. The DFHV-established street hail rates must be used for all taxi trips unless the trip is booked by digital dispatch that accepts digital payment. In which case, the digital dispatch service (the app company) sets the rate, which can be lower, but not higher, than the street hail rate.¹⁷⁷

¹⁷⁷ D.C. Code § 50-301.03; 31 DCMR § 801.7.

7. B Curb App Survey

The team partnered with the taxi app Curb to send a survey to taxi customers in Los Angeles via email. The text of the email was as follows:

Dear {{first_name}},

Curb has partnered with the City of Los Angeles Department of Transportation (LADOT) to get your help with improving mobility for all Angelenos.

LADOT recently adopted a strategic plan that puts user experience at the forefront of their planning and decision-making. As a first step, they are looking to establish an understanding of "Transportation Happiness" across each mode of transportation.

That understanding begins with input from you!

Please complete this [brief survey](#) about your use of and happiness with taxicabs in Los Angeles. There is space for you to fill in contact information if you would like to participate in future research or conversations around the LADOT strategic plan.

You can learn more about the strategic plan and Transportation Happiness initiative at urbanmobilityla.com.

Thank you,

Curb Team and LADOT

7. C For-Hire Vehicle Mobility Data Specification (MDS)

LADOT's Mobility Data Specification (MDS) is a framework for mobility operators in Los Angeles to share data and communicate with the City in a standardized manner. As of December 2018, MDS applied only to micromobility providers including bikes and scooters. As part of the implementation plan for our recommendations, we suggest the following MDS for vehicles.

The ["vehicle" MDS](#) applies to any mobility-on-demand provider using a vehicle such as a taxi, limousine, carsharing, or shuttle. It is designed to accommodate changes in the future, such as the development of automated vehicles or policies, to incentivize high occupancy rides.

The vehicle standard mirrors the micromobility *trips* scheme with a few notable differences:

- No "Parking Verification URL (or uniform resource locator)" or "Device ID"
- "Vehicle ID" is optional, as some providers such as ridesourcing/transportation network companies (TNCs) leverage privately owned vehicles
- "Vehicle type" is a combination of "vehicle type" and "propulsion type" in the micromobility MDS. It includes values such as: "automobile," "taxi," "carsharing," "electric," and "hybrid," and it allows multiple values to be selected
- New field for occupancy that has values "single," "shared," and "high." LADOT leadership will define these values as you implement the new regulatory system

Full Scheme

Field	Type	Required/Optional	Comments
provider_id	UUID (universally unique identifier)	Required	A UUID for the Provider, unique within MDS
provider_name	String	Required	The public-facing name of the Provider
vehicle_id	String	Optional	The Vehicle Identification Number visible on the vehicle itself
vehicle_type	Enum[] (Note: must be equal to one of the values that have been predefined for it.)	Required	Array of descriptive values; allows multiple selections
occupancy	String	Required	The level of occupancy in the vehicle; single, shared, or high
trip_id	UUID	Required	A unique ID for each trip
trip_duration	Integer	Required	Time, in Minutes
trip_distance	Integer	Required	Trip Distance, in Meters
route	GeoJSON FeatureCollection	Required	See Routes detail below
start_time	timestamp	Required	
end_time	timestamp	Required	
standard_cost	Integer	Optional	The cost, in cents, that it would cost to perform that trip in the standard operation of the System
actual_cost	Integer	Optional	The actual cost, in cents, paid by the customer of the <i>mobility as a service</i> provider