Ride Fair:
A Policy Framework for Managing Transportation Network Companies

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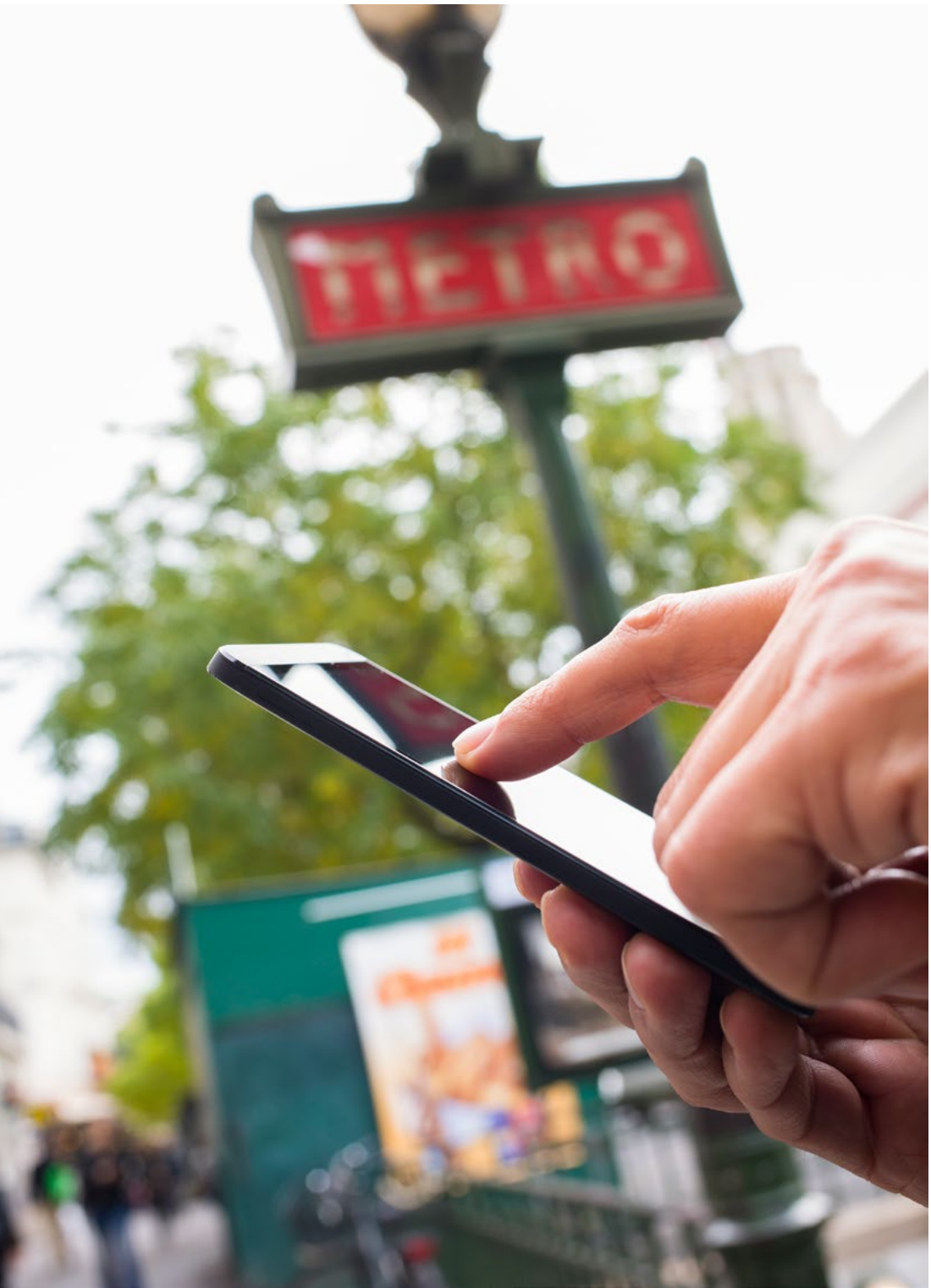

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CONTENT

EXECUTIVE SUMMARY

WHAT ARE TRANSPORTATION NETWORK COMPANIES?

Defined as digital applications that match potential riders with drivers in real time, transportation network companies (TNCs) have been characterized by their ability to "disrupt," forcing cities around the world to respond to a range of public concerns, plan for unknowns, and adapt to constantly evolving technologies, business models, and growing demands for flexible mobility options. Many TNCs now offer services beyond for-hire passenger transport, including bikeshare and scootershare, as well as food and other delivery services. This rapid pace of change has prompted cities to evaluate best practices for regulating this industry. Now, cities must customize their own strategies to, as part of a menu of transport options, ensure TNCs operate in a way that meets cities' goals, such as extending the reach of public transit networks, supporting no- and low-car households, and/or reducing overall vehicle kilometers traveled (VKT), etc.

WHY SHOULD CITIES REGULATE TNCS?

Setting effective TNC regulations enables cities to (a) maximize the benefits of TNCs, such as contributing to people's ability to live car-free (or car-light) or connecting people to economic opportunities, and (b) minimize negative outcomes, like increased congestion and pulling riders from public transit. **TNCs will never substitute for a robust transit network or compact, pedestrian-friendly development**. However, they can provide safe, reliable, affordable connections to transit, as well as flexibility for more complex trips that require carrying goods, traveling with a companion who has limited mobility, and so on. Thinking more comprehensively about TNC regulations will enable cities to ensure that TNCs address existing gaps in transport networks while supporting public transit, biking, and walking as preferable modes for most trips.

HOW CAN CITIES BENEFIT?

To ensure that TNCs support sustainable transportation systems by enabling low- and no-car households and by reducing private car use over time, cities should follow these steps:

Step 1: Adopt an iterative decision-making framework that links TNC operations to broader citywide goals (Section III)

Step 2: Ensure that TNC regulations address all four of the following critical regulatory elements (Section IV):

- Pricing: Incentivize shared, shorter, less frequent trips
- Metrics: Establish baselines to better understand TNC impacts
- Data: Use operator data for policy enforcement and evaluation
- Regional coordination: Facilitate connectivity through multi-jurisdictional regulation

Step 3: Identify and work to minimize any structural barriers that may prevent or limit the implementation of a comprehensive TNC regulatory strategy (Section V)

To better understand cities' motivations, processes, and experiences in regulating TNCs, we conducted four case study analyses, compiled a review of relevant literature, and conducted 15 informational interviews with high-level public and private sector representatives who have direct experience working on TNC regulation. These assessments demonstrated that there are many practices, but few *best practices*. While some cities have adopted interesting, innovative policies on pricing or data sharing, few policies include all four critical regulatory elements mentioned above, and many are limited by structural challenges that have proven difficult to overcome. We review these structural challenges and present recommendations for addressing them, summarized below, in the final section of the report.

STRUCTURAL CHALLENGE	RECOMMENDATIONS
Lack of political will	• Consider how clear, outcome-oriented regulations that extend to all for-hire vehicle operators could level the playing field between incumbents and new entrants • Convene public and private stakeholders to understand concerns and how best to position TNC services to achieve broader mobility and accessibility goals • Integrate TNC regulations into larger efforts to pilot new technologies or pursue innovative applications of those technologies
Legal authority restrictions	• Identify opportunities to contribute to draft TNC regulations by collaborating with the level of government that has regulatory authority • Work with other municipalities to request devolution of power from higher levels of government • Identify opportunities for sustained capacity building and intergovernmental collaboration
Governing capacity	• Reframe approach to mobility service provision • Review and update outdated transportation plans and siloed departmental structures • Identify and support political champions working to balance private service provision with public interests • Set clear enforcement protocols

This report aims to provide cities with a framework for regulating TNCs so that they align with citywide goals. While rules governing labor and safety have, in many cases, been the sole focus of cities' regulations on TNCs, this report does not discuss labor and safety challenges presented by TNCs, as these issues do not fall within the expertise of ITDP. Best practices are, however, beginning to emerge in these areas.

INTRODUCTION

Transportation network companies (TNCs), defined as digital applications that match potential riders with drivers in real time, will never substitute for a robust, high-capacity transit network and compact, pedestrian-friendly development in terms of enabling large numbers of people to move efficiently around cities. However, TNCs have been successful at providing safe, reliable, affordable connections to transit, as well as flexibility for more complex trips that require carrying goods, traveling with a companion who has limited mobility, and so on.

This report focuses on cities' roles in managing TNCs. It presents critical elements that cities should work to include in their regulation of TNCs to ensure that TNCs address existing gaps in transport networks while supporting public transit, biking, and walking as preferable modes for most trips. These critical elements are often left out of cities' approaches to TNC regulation, which have largely been reactive and responsive to specific incidents regarding safety, labor, and related concerns. While these concerns do warrant a regulatory response, cities have an opportunity to proactively frame TNC regulations so that they expand the opportunities provided by on-demand ridesourcing[1] while minimizing unwanted outcomes.

The report also identifies structural challenges to regulating TNCs and presents recommendations for cities to address those challenges based on emerging best practices. These recommendations will help ensure that cities are maximizing the potential benefits of TNCs, minimizing negative impacts, and moving toward a more integrated, goal-oriented vision for urban transportation.

Designated (and, eventually, priced) TNC pickup and drop-off areas could help to address congestion and safety concerns. Curb space is a valuable resource, and should be prioritized—and priced—for the most efficient uses.

Source: Fritz Crittle, Shutterstock.com

1 The term 'ridesourcing' is used in this report to describe "prearranged and on-demand transportation services for compensation in which drivers and passengers connect via digital applications...for booking, electronic payment, and ratings," as defined by Taxonomy and Definitions for Terms Related to Shared Mobility and Enabling Technologies.

HISTORY

Technological advances over the past 15 years have ushered in a new generation of on-demand ridesourcing. TNCs first emerged in 2004 and quickly optimized the on-demand trip experience by reducing wait times and allowing users to prepay for rides.[2] While TNC giants Uber and Lyft emerged out of Silicon Valley, startups like 99 (formerly 99Taxi) in South America and DiDi and Ola in Asia were also appearing as populations and demand for new mobility options surged globally.

TNC ridership has rapidly expanded in recent years as the availability and convenience of on-demand ridesourcing has spread to more and more cities. A 2018 study found that daily trips in New York City on Uber and Lyft jumped from 60,000 in 2015 to 600,000 in 2018.[3] As of 2017, DiDi reportedly carried out up to 25 million daily trips across 400 cities in China.[4]

Lyft launched its own branded electric kick scooters in Santa Monica, CA in 2018.

Source: Shinya Suzuki, Flickr CC

Uber's food delivery service, Uber Eats, uses motorbikes and cars to deliver food in Mexico City.

Source: Ted McGrath, Flickr CC

2 Ridesharing in North America: Past, Present, and Future
3 Understanding the Recent Transit Ridership Decline in Major US Cities: Service Cuts or Emerging Modes?
4 DiDi Completes 7.43b Rides in 2017

The rise and explosive growth of TNCs since 2011 has thrust cities into situations in which they must plan for unknowns and constantly adapt to evolving technologies, business models, and public interests. TNCs are now offering services beyond for-hire passenger transport, including bikeshare and scootershare, as well as food and other delivery services. This rapid pace of change has prompted cities around the world to evaluate best practices for effectively regulating this industry. Relationships between cities and TNCs have been, in some cases, contentious because of private companies' unwillingness to share data and cities' tendencies to use regulation to protect existing for-hire vehicle operators. While interesting policies related to data sharing, pricing, and safety have emerged, an effective, holistic policy has eluded most cities.

CHALLENGES AND NEED FOR REGULATION

Much uncertainty exists about the role of TNCs in urban (and suburban) transportation systems and to what extent the benefits offered by this mode can be maximized through public policy. Multiple reports have linked TNCs to increased congestion in major cities, citing severely inefficient "deadhead" or zero-passenger miles—those driven between and while waiting for trips, as well as between a driver's home and their first passenger trip—as a significant challenge that has proven difficult to quantify. Debates abound about whether TNCs are drawing riders away from transit, cycling, and walking or complementing those modes by enabling people to reduce their reliance on a personal vehicle.[5] Other concerns stem from the unclear financial sustainability of these business models and a general lack of transparency about profitability. Faced with these uncertainties, cities should recognize the growing demand for TNCs (and what transportation gaps might be contributing to that demand) and proactively work to ensure that TNCs operate as a positive piece of a well-functioning transportation network.

Cities are not financing the capital or operational needs of TNCs, but TNC operation requires use of public rights-of-way and curb space. These resources are also critical to accessibility and mobility within the city, and it is the responsibility of the government to maintain their value for all users. Through regulation, cities can directly shape the operational behaviors of TNCs, pricing their use of public infrastructure in a way that takes into account positive and negative impacts.

REGULATORY APPROACHES

Ultimately, cities can pursue one of the following regulatory approaches:

1. Applying existing taxi regulations to TNCs, which may include redefining those regulations to explicitly extend to TNCs
2. Creating a distinct set of rules that apply to TNCs separate from existing for-hire services
3. Replacing existing for-hire regulations with new regulations that apply to (and level the playing field for) taxis, for-hire vehicles, and TNCs
4. Extending certain regulations, particularly regarding pricing, to all vehicles (taxis, for-hire vehicles, TNCs, and private vehicles) operating within city boundaries

The first two approaches are the most common and typically require the least amount of political will because of their limited shift of the status quo. These approaches are often limited in their ability to maximize the benefits of TNCs (and existing for-hire services). Approach 3, however, may allow cities to better integrate taxis and TNCs (and, potentially, other new mobility services) into their modern transportation systems, while leaving space for future innovation.

A major critique of TNC regulations, and pricing in particular, is the potential to push people to private single-occupancy vehicles if fees make TNCs unaffordable. Approach 4 would address this concern by extending a surcharge or fee to all miles driven, regardless of whether that is in a personal or hired vehicle. Congestion pricing and vehicle kilometers traveled (VKT) fees (discussed in Section IV) are examples of this approach.

OPPORTUNITY

Regulating TNCs can be part of a larger effort to reduce demand for private vehicles and expand the reach of existing transportation networks. There is evidence that supports a link between increased TNC use and reduced household vehicle ownership.[6] Reducing demand for personal cars also requires transit improvements, such as frequent bus and rail service and dedicated lanes for transit, as well as infrastructure and policies that support walking and cycling. TNC policies should ensure that ridesourcing services complement a menu of reliable, affordable transportation options.

More broadly, the motivation to regulate TNCs often falls in line with efforts to design and cultivate more livable cities—ones in which transportation is affordable, accessible, safe, and pollution-free. The widely supported **Shared Mobility Principles for Livable Cities** provides a high-level guide for maximizing the benefits of shared modes and encourages policymakers to consider critical factors such as land use, equity, and integration when deciding how shared modes may operate. The principles are a necessary baseline from which to craft targeted, goal-oriented TNC regulations.

Setting effective TNC regulations provides an opportunity to (a) maximize benefits, such as contributing to people's ability to live car-free or connecting people to economic opportunities, and (b) minimize costs, like increased congestion and pulling riders from public transit. Studies from the City of São Paulo's Economic Studies Department found that TNCs have generated a completely new market, made possible by new technologies. TNCs were found to present direct competition to private cars, but case studies also showed that TNCs were not siphoning market share from incumbent taxi services in the São Paulo market. Rather, they attracted new clients, presumably those who had previously walked, cycled, or taken transit.[7] This suggests that TNCs may pull people away from walking, cycling, and public transit in the short term but could limit growth in car ownership in the long term. Because of variability in methodologies, data availability, and city contexts, findings are inconclusive about the extent to which TNCs have contributed to congestion and increased VKT, as well as about the complementarity versus substitution of TNCs and public transit

6 Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States
7 Post-entry rivalry: The immediate impact of the Uber application on taxi door-to-door services

(formal and informal). All of these studies underscore that TNCs present both positive (expanded coverage, links to transit) and negative (congestion, increased VKT, competing with transit) impacts and that cities must manage these companies in a way that ensures integration with other sustainable modes.

In São Paulo, a study conducted by the city found that TNCs compete more directly with private car trips than taxi trips, but may also attract those who had previously walked, cycled, or taken transit. While TNCs may pull people from these modes in the short term, they could help limit growth in car ownership in the long term.

Source: Cleber Alves, Shutterstock.com

METHODOLOGY

To develop an understanding of cities' motivations, processes, and outcomes for regulating TNCs, we first conducted case study reviews of Mexico City, São Paulo, Chicago, and London (included as Appendices A–D). Mexico City and São Paulo were early adopters of TNC policies, and Chicago and London's policies provide good practice examples of some of the key regulatory elements discussed in the report.

Building from that knowledge, we compiled a review of relevant literature. We also conducted 15 informational interviews with high-level public and private sector representatives who have direct experience working on TNC regulation (see Appendix E). These interviews led to the identification of common structural challenges across cities that limited their ability to regulate TNCs, as well as to the understanding and documenting of lessons. Recommendations to address those challenges were informed by both suggestions from interviewees and best practice examples from our case study analysis.

Source: iStock

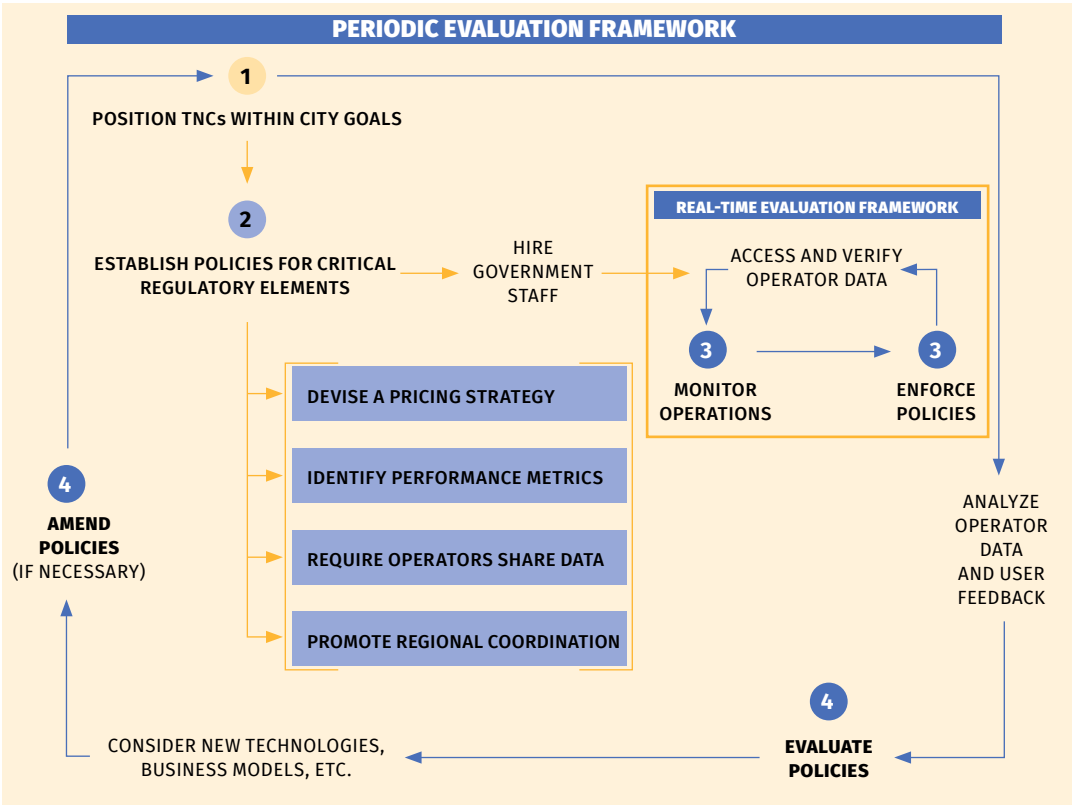
DECISION-MAKING FRAMEWORK

This report uses the following decision-making framework—based on emerging best practices and compiled according to the methodology described above—to demonstrate the iterative process cities should undertake when thinking about regulating an emerging, privately operated transportation mode.

This policy framework was first introduced in ITDP's policy brief ***Optimizing Dockless Bikeshare for Cities***, where it addressed widespread uncertainty in decision-making on how to regulate dockless bikeshare. However, the framework can be applied to other new mobility modes offered by private companies on public rights-of-way. Methodological in its approach, the framework is intended to minimize logistical hurdles any time a city is presented with a new mode to regulate. If new modes emerge, processes, staff, and protocols will already be in place to establish a pilot, define goals and success measures, collect and analyze operator data, and oversee and evaluate the system.

The framework builds on the process of adaptive management, an approach to decision-making intended to reduce uncertainty over time. Often applied to environmental management challenges, adaptive management is characterized by four actions: plan, implement, evaluate and and adapt, and adjust.[8]

ITDP's decision-making framework



Cities typically have the authority to closely manage how private companies behave when using public space. Permit systems, licensing requirements, insurance, requests for proposals, memorandums of understanding, or similar tools can help to communicate exactly what the city wants from operators and how this will contribute to the city's long-term transportation goals. Specific to TNCs, cities should:

1. Position TNCs within existing mobility and accessibility goals (e.g., reducing single-occupancy vehicle use, improving access to transit) and set regulations that compel operators to help achieve those goals in exchange for their use of public road and curb space

2. Ensure that a comprehensive policy to manage TNCs includes these critical regulatory elements:

   a. Incentivize shared, shorter, less frequent trips through **pricing**
   b. Identify **metrics** for understanding impacts and progress toward goals
   c. Require operators to share **data** with the city for enforcement and system evaluation purposes
   d. Promote **regional coordination** and streamline administrative demands

3. Monitor operator compliance and enforce policies in real time using data shared between operators and trained government staff

4. Use operator data and user feedback to periodically evaluate and amend policies based on how well TNCs contribute to city goals

CRITICAL REGULATORY ELEMENTS

The four critical regulatory elements—pricing, metrics, data, and regional coordination—should be included in any city's TNC regulatory strategy. If the elements are well designed and implemented, they will help cities develop TNC regulations that contribute to broader transportation and sustainability goals. In this section, various approaches are presented to achieve each element, which can be implemented in a variety of ways, depending on resources, government priorities and capacity, etc. A system-level approach, and built-in evaluations of the system over time, will be critical to understanding how these elements interact with (or, potentially, contradict) each other.

PRICING | INCENTIVIZE SHARED, SHORTER, LESS FREQUENT TRIPS

Pricing is a tool commonly used in transport policies to promote efficiency and equity. In terms of TNCs, pricing may also be employed to incentivize preferred behaviors such as sharing trips or forgoing a TNC trip altogether if a more sustainable mode is available. And while in some cases private companies can provide transportation services more efficiently and cost-effectively than public agencies can, private operators should be required to pay for social and environmental costs inflicted while operating on public infrastructure. In the case of TNCs, additional cars on city streets yield increased traffic congestion, greenhouse gas emissions, safety concerns for pedestrians and cyclists, and so on, and mitigating those outcomes has a cost to the city.[9] Public oversight of TNC operations and enforcement of policies requires staff time and funding. Pricing TNCs can help minimize these negative impacts (e.g., by helping to fund improvements to mass transit infrastructure and service) and generate revenue to allow city staff to adequately conduct TNC oversight. Incentivizing shared, shorter and less frequent TNC trips is critical for achieving efficiency and environmental goals, and pricing is one of the most direct and effective levers available to cities.

A flat tax on every TNC trip in Chicago support's the city's public transit system, as well as making on-demand transportation more accessible to people with disabilities.

Source: Shutterstock.com

SURCHARGE

Many cities that set pricing strategies for TNCs do so with a flat or percentage surcharge assessed on each active passenger trip carried out by a TNC. Chicago assesses a flat US$0.67 fee per TNC trip, the majority of which helps make on-demand transportation available to people with disabilities, with the rest earmarked to support Chicago Transit Authority (CTA) improvements. An additional US$0.02 is assessed per trip to cover city staff time in overseeing TNC regulation. A percentage surcharge, like Rio de Janeiro's 1% assessed on each active passenger trip, is another format through which to levy this type of pricing strategy. A percentage surcharge is dynamic, meaning the fee corresponds to the distance traveled (longer trips cost more and generate a higher gross fee than shorter trips). Dynamic surcharges may incentivize operators to design their algorithms to favor shorter trips and pooled trips, which could yield efficiency benefits. Dynamic surcharges may also, in theory, account for congestion if operators charge a higher rate per mile during peak hours.

Examples of Surcharges on TNC trips

DATE IMPLEMENTED	CITY	SURCHARGE	FLAT OR DYNAMIC	DIRECTED TO
July 2015	Mexico City, MEXICO	1.5% of trip cost	Dynamic (distance)	Taxi, Mobility, and Pedestrian Fund
November 2017	Chicago, IL, USA	US$0.69/trip	Flat	US$0.67/trip for on-demand transport for people with disabilities and transit improvements
May 2018	Rio de Janeiro, BRAZIL	1% of trip cost	Dynamic (distance)	US$0.02/trip for program administration
January 2019	Calgary, AB, CANADA	Can$0.30/trip	Flat	Road upgrades, mobility policies, traffic education advertisements, Taxi.Rio app (the city government ridesourcing app)
Proposed	San Francisco, CA, USA	1.5–3.5% of trip cost (private vs. pooled rides)	Dynamic (occupancy and distance)	Wheelchair accessible taxi incentives

Sources: Mexico City (see Appendix A), Chicago (see Appendix C), Rio de Janeiro, Calgary, San Francisco

CONGESTION PRICING

Congestion pricing is a similar but broader strategy to incentivize shared, shorter trips—one supported by many TNCs, including Uber and Lyft, given the likely increase in demand for shared rides.[10] At a certain level, surcharges levied on TNC trips (as described above) could make them too expensive for users to justify, potentially shifting travelers back to single-occupancy vehicles. Instead, congestion pricing covers all vehicles, disincentivizing single-occupancy trips and encouraging shared rides across the board. Congestion pricing more accurately covers the cost of total kilometers driven (whether for an active passenger trip or deadheading between trips) and can help to disincentivize empty trips. In some cases, like in London, taxis and/or TNCs have been exempt from congestion charges, removing the incentive for shorter trips or more efficient modes. Revenues from London's congestion charge—which could increase if Transport for London (TfL) moves forward with removing the TNC exemption—support projects including bus network improvements, road and bridge improvements, and road safety.[11, 12]

Private hire vehicles and TNCs are not currently included in London's congestion charge, but that could change as Transport for London evaluates the impacts of extending the charge to all vehicles.

Source: Life in Pixels, Shutterstock.com

Congestion pricing requires a high level of political will and stakeholder buy-in to implement, which could be barriers to its implementation. Also, congestion charging requires strong and competitive alternatives to driving—namely, frequent transit and safe, comfortable biking and walking routes—which can adequately support those who choose not to or cannot afford to pay the congestion charge.

10 Uber Endorses Charging Drivers to use Congested Roads
11 Private Hire Cars Face Paying London Congestion Charge
12 Freedom of Information

PRICE PER KILOMETER TRAVELED

One of the most outcome-oriented approaches to pricing TNCs is to implement a fee per kilometer traveled, as opposed to a flat rate per trip. This approach was first implemented in São Paulo in 2016. The fee could be adjusted based on occupancy and where in the city trips were occurring (higher in the city center during peak travel hours, lower in outer neighborhoods), and discounts could be offered for preferred vehicles, such as hybrids, electric, and wheelchair accessible vehicles. The São Paulo scheme also limited TNC kilometers driven across all companies to the equivalent average monthly mileage of 5,000 taxis (later raised to 10,000). The total TNC monthly mileage included not only trips with passengers but also any distance driven waiting for subsequent trips (referred to above as deadhead or zero-passenger miles). This encourages companies to optimize their routing technology to minimize the driving distance between trips by discouraging unproductive deadhead miles and prioritizing shared rides. If TNCs travel more than the target mileage, they would be fined at a progressive rate, at least initially. The progressivity of the fine, however, was successfully challenged by Uber, which held a majority market share in São Paulo at the time.

While the aim of a price per kilometer scheme is to optimize supply, the revenues generated can be significant; in 2017, São Paulo estimated municipal revenue from TNC road use credits at R$48 million (approximately US$13 million), but actual revenues were 78% higher.[13] These revenues were directed toward managing and improving city streets.[14]

A price per kilometer traveled was implemented on TNCs in São Paulo to help address notoriously high traffic congestion, and related negative outcomes, in the city.

Source: Shutterstock.com

13 Prefeitura do Município de São Paulo
14 Sao Paulo's Innovative Proposal to Regulate Shared Mobility by Pricing Vehicle Use

PRICING THE CURB

In most cities, TNCs operate in the most congested areas at the most congested times of day.[15] And while most cities charge personal vehicles for use of curb space through parking fees, few charge TNCs for using that space for pickups and drop-offs, despite the increased congestion and safety risks these services may present. The role of the curb is changing, and to price the curb is to manage it. The curb is about to become a much more dynamic space, and pricing will ensure that it is being used efficiently and equitably. In addition to the above strategies, pricing curb space and designating TNC pickup and drop-off areas could help to address a different set of negative outcomes related to congestion and safety, such as the increased supply of TNC vehicles and double parking in already congested areas. Ultimately, the curb should be prioritized—and priced—for the most efficient uses (e.g., high-capacity transit service, high-value freight).

While few cities have implemented curb pricing for TNCs, many charge additional fees for trips made to highly congested destinations. For example, Chicago charges an additional US$5 fee for trips made to both of the city's airports, McCormick Place (a downtown convention center), and Navy Pier (an iconic downtown attraction). Other cities, like Washington, DC, have implemented designated TNC pickup and drop-off zones on popular commercial streets that see heavy congestion during weekend evening hours. While these zones are not currently priced, they could eventually carry a fee per trip as an additional means of managing demand for curb space.

A passenger waits for his Uber at a pickup point in Penang, Malaysia

Source: TY Lim, Shuttertock.com

Technological innovations and multi-stakeholder partnerships are helping cities carry out more informed curb management. Efforts such as SharedStreets establish common data standards that allow both cities and TNCs to better understand how the curb is being used, enabling cities to effectively price the use of curb space to manage demand, especially during peak hours. Curbside management strategies could also serve as alternatives to the traditional enforcement of traffic violations like double parking to pick up or drop off. Curb management will not, however, address space constraints that arise from travelers each taking individual TNC rides; cities will need to couple a curb management approach with a strategy for incentivizing shared rides (or disincentivizing single passenger rides).

Regardless of the pricing approach (or combination of approaches) cities undertake, the goal is the same: incentivizing shared TNC trips to reduce the number of vehicles on the road and their associated negative impacts. Pricing also generates revenue, which can help cover system administrative costs and/or fund improvements to transit, cycling, and walking facilities. The following table compares objectives and potential outcomes of the above pricing strategies for managing TNCs.

Objectives and Examples of Pricing Strategies

PRICING STRATEGY	OBJECTIVE	EXAMPLE
Surcharge	Generate revenue to offset costs of program administration, transit improvements, etc.	Mexico City (1.5% tax/trip) San Francisco (proposed: 1.5–3.5% tax/trip depending on number of passengers)
Congestion pricing	Reduce congestion during peak times	Stockholm (taxis and for-hire vehicles including TNCs must pay the fee)
Price per kilometer traveled	Reduce zero-passenger ("deadhead") miles traveled by TNCs	Sao Paulo (variable fee based on occupancy and time of day, discounts for preferred vehicles)
Pricing the curb	Incentivize more efficient use of curb space, especially during peak times	N/A

METRICS | ESTABLISH BASELINES TO BETTER UNDERSTAND TNC IMPACTS

TNCs might be a solution to certain mobility challenges cities currently face, but cities can only know this for sure if they identify those challenges and implement metrics to evaluate costs, benefits, and other impacts. Business and management scholar Peter Drucker famously said, "If you can't measure it, you can't improve it," and as TNCs continue to shift travel behaviors, it is critical to understand what impacts are playing out on the ground. Good metrics help to understand and quantify these impacts as they relate to the city's broader environmental, economic, and sustainability goals, to ensure protection of public interests and improvement over time.

In implementing metrics, baselines should be calculated, and targets for TNC contributions to those goals should be established. For example, in September 2018, California passed legislation to create a baseline for greenhouse gas emissions per passenger mile generated from TNCs by 2020. By 2021, annual targets for emissions reductions will be adopted, and TNCs will be required to develop emissions reduction plans to meet those targets.[16]

Without identifying metrics for success early on, it will be difficult to evaluate how the system is performing over time and what additional policies or regulations could be adopted to improve performance. For example, when Mexico City began reviewing options for regulating TNCs in 2015, the city defined specific goals related to road safety, security of passengers, emissions reductions from transportation, development of new technologies, and provision of clean and comfortable transport options.[17] However, it did not identify metrics to measure how TNCs were contributing to those goals over time. This makes it challenging for the city to evaluate how TNC regulations are working, whether TNCs are attracting users who would have otherwise taken transit, biked, or walked, and whether regulatory adjustments should be made.

Metrics that could inform decision-making regarding TNCs include (but are not limited to):

Goal-oriented Metrics for Evaluating TNC Impacts

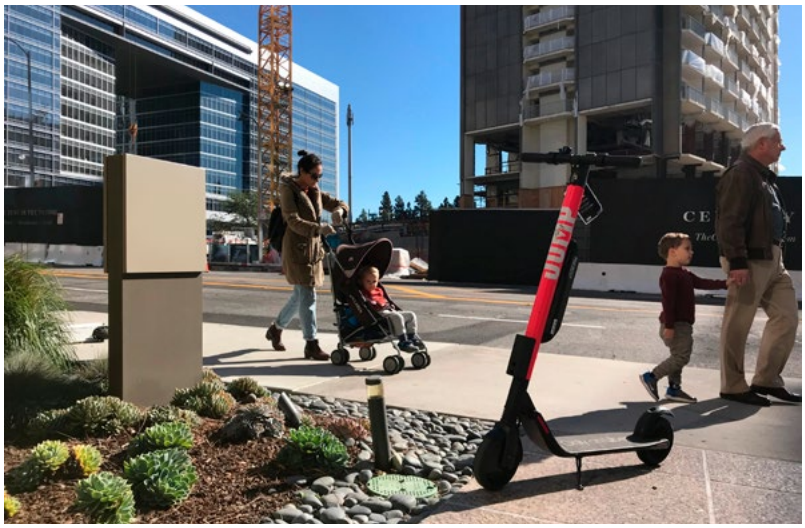
GOAL	METRIC
Spatial equity	• Average wait time in designated underserved areas
Congestion reduction	• Average km traveled/TNC vehicle • Percentage of time with no passenger(s)/TNC vehicle • Average passengers/vehicle (during trips & total)
Safety	• Traffic injuries involving TNCs/1,000,000 vehicle km • Fatalities involving TNCs/1,000,000 vehicle km • Number of passenger complaints regarding safety/1,000 passenger trips • TNC traffic citations/passenger km
Emission reduction	• Greenhouse gas emissions/total km driven

As described in the Data section, cities should ensure that the data needed to evaluate the impacts of a TNC system on equity, congestion, safety, emissions, and other factors is not only being collected, but being collected in a format that facilitates efficient analysis. Data submitted from TNC operators could shed light on more specific targets set at the operations level, such as vehicle utilization rates, spatial diversity of origins and destinations, share of wheelchair accessible trips, etc.

16 SB-1014 California Clean Miles Standard and Incentive Program: Zero Emission Vehicles
17 Laura Ballesteros, Personal interview (2018)

DATA | USE OPERATOR DATA FOR POLICY ENFORCEMENT AND EVALUATION

In addition to on-the-ground enforcement of vehicle and licensing requirements (typically conducted using traffic stops and in response to complaints), broader enforcement of TNC regulations will require verified data to be provided by each operator. To date, many TNCs have been hesitant to release data to cities for fear of exposing operating secrets and other proprietary information to competitors, and because of uncertainty about cities' ability to protect users' personally identifiable information (PII). Regardless, there are emerging best practice cases for data protection. For example, cities have used third parties to house operator data, as in Seattle, where shared mobility operators submit data to the University of Washington's **Transportation Data Collaborative**. This setup helps ensure that certain data is protected from mandatory disclosure laws, such as Freedom of Information Act requests in the United States, while also enabling the data to be safely analyzed by third-party groups should the government not have the capacity to do so.



Trips made using TNC vehicles and micromobility modes, like e-scooters, generate lots of potentially identifiable travel data that companies and cities are responsible for protecting.

Source: Alex Millauer, Shutterstock.com

Access to real-time data on the location of all active TNC vehicles, as well as periodic reports on trips, crashes, complaints, etc. in a standardized format, should be required by cities as a condition of operation. Operator data submitted through an open application program interface (API) that has been verified by the city or a third party is invaluable to cities' ability to monitor and enforce regulations and to understand system performance in real time and in the long term. Requiring an open API does not, however, enable the city to access specific trip, crash, maintenance, or other historic data. This data will need to be reported separately according to standards established by the city. Operator data on active vehicle locations throughout the city should also be made publicly available for integration into third-party trip-planning apps (Transit app, Citymapper, etc.) and for research and other public uses that may help advance understanding of TNC use and impacts.

Properly trained city staff with the capacity to apply and analyze reported operator data will be necessary. These staff should be tasked with using reported data to evaluate metrics (as discussed above) and system performance over time. Further, staff should consider implementing a process to field-verify operator data, at least in the short term. This could include taking TNC trips and verifying that those trips show up in the trip reports submitted by operators. Verification procedure specifics should not be shared with operators, since instances of data workarounds by operators have caused issues in the past.[18] This labor-intensive field verification may eventually be replaced by more sophisticated methods; regardless, operator data verification should be an ongoing process. Penalties for submitting altered or incomplete data to the city should be severe enough to disincentivize this behavior and underscore the value of accurate, reliable data to the functionality of the entire system.

A protocol for data collection and sharing across agencies, particularly at the city level, should also be considered. In California, state-level regulations allow for broad discretion on how TNC data is collected and shared; however, the data itself is only reported at the aggregated state level and cannot be shared with sub-state agencies or the public.[19] TNC trips are happening locally, though, and data aggregated to the state level is significantly less valuable in informing local planning decisions or contributing to monitoring and evaluation efforts.[20]

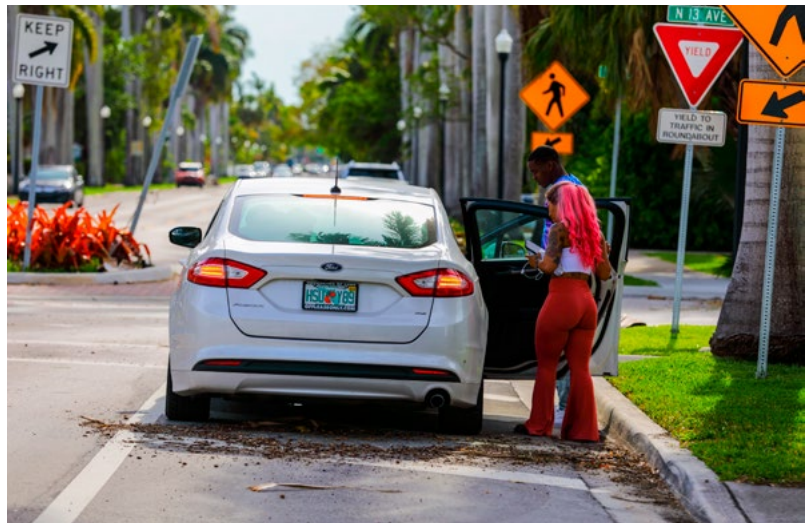
REGIONAL COORDINATION | FACILITATE CONNECTIVITY THROUGH MULTI-JURISDICTIONAL REGULATION

Often unperceived by riders, jurisdictional boundaries can complicate regulation and enforcement of TNC operations. For example, the Mexico City Metropolitan Area spans three states, and several million TNC trips are made across state lines daily. Hyper-localized regulations that differ from state to state—such as requirements for vehicles, liability insurance coverage, and whether cash payments are permitted—create challenges for policy coordination, enforcement, and integration with other modes. This situation could also trigger a race to the bottom if jurisdictions adopt more lax regulatory standards than their neighbors. Furthermore, confusion—particularly about whether cash is an acceptable form of payment—can be widespread among users, who might not be aware of regulatory differences when traveling between states.

In nearly all states in the United States, TNC regulations—particularly regarding insurance, safety, and pricing—have been adopted at the state level, with major metropolitan jurisdictions and airports often being granted the ability to pass additional regulations as long as they do not conflict with established state laws. However, regulating TNCs at the state level limits the ability to customize policies to local conditions. A special purpose government, countywide transportation agency, or a similar entity that operates at a more local (but still regional) scale than a state government could facilitate cooperation between an entire metropolitan area, TNCs, and other for-hire vehicle operators.[21] For example, in Washington state, the City of Olympia was given legal authority by the county government to oversee TNC regulations on behalf of smaller neighboring municipalities Lacey, Tumwater, and Yelm to “simplify

18 How Uber Deceives the Authorities Worldwide
19 The TNC Regulatory Landscape
20 Drew Cooper, Personal interview (2018)
21 Regional Regulation of Transportation Network Companies

In the US, TNCs are mostly regulated at the state level. These regulations typically include requirements for insurance, standards for drivers and vehicles, and restrictions on how and where TNCs can operate, but rarely mention critical elements like pricing, data, measuring progress, and opportunities for regional coordination.



Source: Felix Mizioznikov, Shutterstock.com

permitting and maintain common regulatory implementation."[22] In the United Kingdom, TNCs and other private hire vehicles (PHVs) are regulated regionally by TfL, rather than by local governments. TfL is responsible for managing transportation across metropolitan London, which includes the City of London and its surrounding 32 boroughs.

Regulating TNCs at the regional level—either through an existing regional body or through the creation of a new one—could help reduce duplicated staff time and associated administrative costs for managing the system and for enforcement. A regional regulatory authority responsible for TNC oversight could also establish a more streamlined channel of communication with operators and the public. While regional regulation may not be attainable in every case, efforts to work with neighboring municipalities to standardize regulations could also yield similar connectivity benefits.

STRUCTURAL BARRIERS AND RECOMMENDATIONS

To date, regulating TNCs has been particularly challenging for cities. Complex factors and structural challenges often prevent a comprehensive regulatory strategy from being implemented. Several of these major challenges are explored below, with recommendations for addressing them. Doing so may enable cities to design and implement more comprehensive, goal-oriented regulations

UNCERTAINTY IN CATEGORIZATION OF TNCS

While not a structural barrier per se, cities must decide how TNCs are categorized: for-hire vehicle companies, transport companies, software platforms, or something else entirely. Each designation carries different regulatory restrictions. If TNCs are not categorized, it will be unclear which government agency should be responsible for their regulation and oversight or which agencies have the legal authority to regulate. Without this designation, regulation may stall or not occur at all.

This uncertainty has, for many cities, led to the "lowest hanging fruit" response, forcing TNCs into existing taxi regulations. This has resulted in service inefficiencies, such as in Berlin, where TNCs must use a fare meter and return to a dispatch location between each trip to operate legally.[23] Conversely, in Mexico, TNCs are recognized as private transport services, not taxis (which are regulated as public transportation). This distinction subjects TNCs to less stringent regulations than traditional taxis, namely that TNCs need not meet certain operating requirements, like maintaining a certain percentage of their fleet as wheelchair accessible, which taxis, as public transport services, have to.[24] Similarly, in 2017, the European Court of Justice deemed TNCs to be transport companies, not taxis; however, in this case that distinction exposed TNCs to stricter transportation laws across the European Union.[25] In both cases, the playing field between taxis, for-hire vehicles, and TNCs is conspicuously unbalanced.

Regulating TNCs as partially or entirely different from taxis and other for-hire vehicles—especially to protect the latter industries—can also add logistical challenges for cities. For example, in India and China it is becoming more common for taxis to appear on TNC platforms; the same vehicle, even, can be listed on multiple platforms. And taxis can provide shared service, similar to "pooled" rides provided by TNCs, depending on user demand. This demonstrates the difficulty in discerning which regulations a single vehicle is subject to.

Recommendations for reducing uncertainty in categorizing TNCs: Relevant agency and elected officials should consider what imposing different regulations for TNCs and taxis would ultimately achieve—improved safety for users, reduced single-occupancy vehicle trips, etc.—and whether those outcomes would differ if a new, but standardized, approach to the regulation of all for-hire vehicles were implemented. For example, Helsinki deregulated its taxi sector in July 2018, which resulted in fare meters no longer being mandatory and opened the door for dynamic pricing. These changes leveled the playing field between taxis and TNCs.[26]

Categorizing TNCs —as taxis, transport companies, software platforms or something completely new— or failing to do so, has caused confusion and logistical challenges for cities.

Source: Carlos Felipe Pardo

23 Digitalisation and Working Life: Lessons from the Uber Cases around Europe
24 Disruptive Innovation in Latin America and the Caribbean: Competition Enforcement Challenges and Advocacy Opportunities
25 European Court Rules Uber is a Transport Company, Not a Software Company
26 Act on Transport Services

LACK OF POLITICAL WILL

Motivations to address the negative outcomes associated with TNCs differ across cities and can be limited by a lack of political will to move regulations through the appropriate channels, especially in the face of vested interests and strong advocacy for and against change. Vocal opposition groups—such as taxi drivers—can have significant local influence, and TNCs themselves have mounted campaigns to resist regulation.

EXISTING OPERATORS OPPOSE TNCs

Incumbent transport operators—taxi drivers, informal transit providers, etc.—in developing cities are usually powerful political players and can directly influence policies regulating TNCs. Typically, existing operators are vocal advocates of banning or severely restricting TNC operations. In Mexico City, drivers of *colectivos* (typically minivans or shared taxis) successfully lobbied the government to prohibit TNCs from offering shared (also referred to as "pooled") rides. While this result protects the *colectivo* drivers, it does not align with goals to reduce private vehicle trips, nor does it encourage the use of (or connection to) more sustainable modes like transit, cycling, or walking.

Anti-TNC protests staged by taxi drivers blocked traffic on major roads in Rio de Janeiro.

Source: Agencia Brasil, Flickr CC

A similar response was mounted after the launch of Uber's less expensive UberX service (which uses nonprofessional drivers and any type of vehicle, not just black cars and SUVs) in São Paulo in 2014. Ridership, as well as drivers for the service, increased exponentially, and in 2015 the city's taxi union mounted forceful, violent demonstrations, claiming that Uber violated competition rules and did not carry out sufficient safety checks on drivers and vehicles.[27] This eventually led to an outright ban on unregistered vehicles operating as TNCs. The taxi lobby in São Paulo also pushed for a ban on shared TNC rides, which succeeded; "carpool TNCs," like BlaBlaCar, may operate in the city, but only as not-for-profit entities (driver and passengers split costs for a trip, with a fee charged only to connect these parties), and privately operated vanpools, like Jetty and Urbvan, which provide fixed, express route service, have been banned since the early 2000s.

Licensed taxi drivers in São Paulo parked in front of the city's Opera House (Theatro Municipal) to protest Uber in 2015.

Source: Diego Torres Silvestre, Flickr CC

Vanpool service provided by private companies like Jetty, which operates primarily in Mexico City, are banned in São Paulo.

Source: Jetty

Mexico City and São Paulo's decisions to placate incumbent operators by banning shared TNC rides does nothing to encourage fewer single-occupancy vehicle trips or reduce traffic congestion. Inevitably, the additional choice and convenience TNCs offer will attract some users who may otherwise have taken a taxi, transit, or other mode. While the impacts of TNC operations on existing operators should not be overlooked, protection of the latter should not take precedence over a comprehensive regulatory system that guides TNC and taxi service provision toward established citywide goals. Instead, a more integrated, outcome-oriented approach that applies comparable regulations to existing for-hire and new TNC services could help create a fairer operating environment.

TNC OPERATORS RESIST REGULATION

Well-funded campaigns launched by TNCs themselves and, at times, uncertainty from elected officials can stall progress toward developing policies that address TNC operations. TNCs have succeeded in generating strong constituencies of users who come to rely on their services, especially in lieu of alternative options. Combined with lobbyists and government affairs staff, TNCs are well positioned to resist regulations that could threaten their revenue streams. They also have a history of employing the "nuclear option"—pulling out of a city completely if certain regulations are passed. In 2016, Uber and Lyft spent more than US$8 million on advertisements and outreach in Austin, Texas, to support a local proposition that would essentially allow TNCs to regulate themselves, using their own systems to conduct driver background checks. When the proposition failed, both companies ceased operations in the city.[28] In July 2018, both Uber and Lyft launched wide-reaching campaigns urging customers in New York City to contact their local representatives to vote against legislation that would cap the number of ridesourcing vehicles in the city.[29] This campaign, however, was unsuccessful; the cap was enacted—along with a minimum wage for drivers—in August 2018.[30]

Recommendations for building political will:

- Consider how clear, outcome-oriented regulations that extend to all for-hire vehicle operators could level the playing field between incumbents and new entrants
- Convene public and private stakeholders to understand concerns and how best to position TNC services to achieve broader mobility and accessibility goals
- Integrate TNC regulations into larger efforts to pilot new technologies or pursue innovative applications of those technologies

Adopting TNC regulations as part of a larger effort to pilot new technologies or pursue innovative applications of those technologies could generate much-needed political and public support for their operation. A city that is welcoming to innovation may be attractive to investors and entrepreneurs, which could translate into economic and social opportunities for city residents. When initially considering regulating TNCs, the Mexico City government wanted to maintain its image as a "city of innovation" and portray itself as inviting and accepting of new technologies.[31] To that end,

28 Uber and Lyft are Leaving Austin after Losing Background Check Vote
29 Uber and Lyft Encourage NYC Customers to Oppose Proposed Ride-hail Cap Legislation
30 Uber Hit with Cap as new York City Takes Lead in Crackdown
31 Rufino León Tovar, Personal interview (2017)

the government committed to facilitating public debates, negotiation processes, and working groups to develop a common understanding between TNCs, taxi drivers, the government, and other stakeholders. The city also tasked LabCDMX, a municipal government agency responsible for integrating new technologies, to compile the outcomes and conclusions of these discussions and make recommendations to the mayor. These recommendations helped to inform Mexico City's regulation of TNCs, which, to some extent, reflected the concerns and desires communicated during the working group discussions. This approach of convening stakeholders, as well as positioning TNC service as an innovative tool to achieve broader mobility and accessibility goals, should serve as a model for other cities.

LEGAL AUTHORITY RESTRICTIONS

Cities' authority to regulate specific aspects related to TNC operations can be limited by regulations put in place by a superior government body, existing bylaws, and so on. This can lead to tension between levels of government. In Mexico and India, most cities do not have the authority to regulate transport services, as this is primarily handled at the state level. Both national and local TNC regulations exist in China; however, these focus mainly on driver and vehicle requirements.

In the United States, most states have adopted TNC regulations, with some delegating authority to local governments to make additional regulations. The latter is not the case in California, however, where the state's Public Utilities Commission holds the legal authority to regulate TNCs, and cities like San Francisco are powerless to set their own regulations. Cities can, however, work around legal restrictions by proposing ballot initiatives, which are then voted on in local elections. Informed by the city's policy goals to reduce congestion and low-occupancy vehicle trips, San Francisco's current ballot measure proposes a 1.5–3.5% fee (depending on the number of passengers) on TNC trips that originate in the city.[32] Revenue generated from the fee would cover the costs of increased congestion, to which TNCs have been shown to contribute.[33] Voters will decide the fate of the fee at the ballot box in 2019.

Recommendations for addressing restrictions on authority:

- Identify opportunities to contribute to draft TNC regulations by collaborating with the level of government that has regulatory authority
- Work with other municipalities to request devolution of power from higher levels of government
- Identify opportunities for sustained capacity building and intergovernmental collaboration

If cities do not have the authority to regulate TNCs, there may be an opportunity to collaborate with a higher level of government and contribute suggestions for draft regulations. Otherwise, municipalities could work together to call for a devolution of power from higher levels of government, especially if the latter is not addressing TNC regulation at all or in a manner that takes local concerns into account. Regardless, addressing this barrier will likely be a long-term effort that requires sustained capacity building and intergovernmental collaboration.

32 City and County of San Francisco Board of Supervisors – Regular Meeting (2018)
33 TNCs and Congestion (2018)

GOVERNING CAPACITY

KNOWLEDGE GAPS IN GOVERNMENT

City governments are chronically underfunded and overworked, and many rely heavily on consultants to contribute to specific projects. This can add much-needed capacity in the short term but can be limiting in the long term, because once projects are completed, consultants take their knowledge with them. Without the necessary institutional understanding, it can be difficult to meaningfully address complex issues like the regulation of emerging technology-enabled transportation modes. Furthermore, decision-making is often informed by obsolete transportation plans, where they exist, that contain outdated data and do not include new modes.[34] The rapid pace of development and change associated with these new modes, and the need for cities to quickly respond, is also at odds with traditional planning frameworks that focus on the longer term future. However, continuing to operate under this status quo will limit cities' ability to be proactive in effectively minimizing negative impacts of not only TNCs but also other emerging technology-enabled mobility modes.

Outdated transportation plans which prioritize vehicle throughput and do not account for new shared modes, can limit government understanding about how to effectively integrate TNCs and other technology-enabled mobility.

Source: ITDP

Monitoring TNC compliance with city regulations can be a daunting task for city staff, who may not be trained or available to do so. Agencies like the San Francisco Municipal Transportation Agency (SFMTA) are evaluating the potential of alternative monitoring strategies, such as using open APIs to monitor TNC pickup and drop-off locations. Automation of these tasks—which is only possible when operators are required to share data with the city—will help reduce the staff capacity needed to monitor TNC operations.[35] Still, many cities are a long way from this level of technological capability. In South Africa, where more than half a dozen TNCs currently operate, a chasm between government and the private sector has emerged when it comes to advanced technological knowledge and innovation, as well as the ability to consistently analyze data. A lack of understanding of these concepts has led to government officials being largely unwilling to build

34 Yolisa Kani, Personal interview (2018)
35 Warren Logan, Personal interview (2018)

relationships with or directly monitor private companies, like Uber and Taxify, operating on city streets. As a result, regulating TNCs has not been a deliberate conversation in government.[36]

TRANSPARENCY CONCERNS

Government transparency and accountability is critical for a successful regulatory strategy, particularly one that includes revenue-generating elements like surcharges or permit fees. Many cities, however, struggle with low levels of transparency in this context, which can raise concerns about the city's motivations behind regulation and taxation. Interviews with stakeholders in Mexico City indicate that there is little transparency around how the fund that houses revenue from the city's 1.5% fee per TNC trip is being used. And while TNCs have started contributing to the fund, the amount contributed so far and how the funds are being used is still unclear.

LIMITED RESOURCES FOR ENFORCEMENT

Enforcement of TNC regulations relies heavily on the availability of police and parking enforcement agents, who are typically limited to citing moving and parking violations as they occur. Some cities have had success applying revenue from TNC trip fees directly to enforcement efforts. In 2017, Portland, Oregon, hired 10 enforcement inspectors tasked with conducting on-street audits of TNC and taxi drivers and vehicles.[37] Elsewhere, like in Mexico City, revenue generated from on-street parking meters has supported parking enforcement efforts, which could be extended to include TNC regulation enforcement as well.[38] In many cases, though, TNC regulations do not include explicit penalties or mechanisms of enforcement beyond general vehicular inspections, so the extent to which regulations are enforced remains highly uncertain and TNCs operate in a weak enforcement framework. For example, operators in Mexico City have reported that the online vehicle registration platform established through the city's regulations was not functional and that the required sticker indicating a vehicle had been registered under a TNC was not mandatory to operate.

Recommendations for improving governing capacity:

- Reframe approach to mobility service provision
- Review and update outdated transportation plans and siloed departmental structures
- Identify and support political champions working to balance private service provision with public interests
- Set clear enforcement protocols

Reframing how cities view new mobility services will be critical for building capacity and bringing together the knowledge needed to design and implement innovative policy solutions. For example, in 2015, around the time Mexico City began to consider regulating TNCs, it renamed its Ministry of Transport and Roads the "Ministry of Mobility" (SEMOVI) to reduce the agency's focus on private car travel and adopted a new mobility law that

36 Yolisa Kani, Personal interview (2018)
37 Portland Collects $3 Million More Than it Needs from Uber and Lyft Passengers
38 Impacts of the EcoParq Program on Polanco
39 Laura Ballesteros, Personal interview (2018)
40 Ley de Movilidad del Distrito Federal

established mobility as a right for all.[39, 40] Outdated transportation plans and government department structures that do not allow for or consider planning for emerging technology-enabled modes should be reviewed. Admittedly, traditional planning does not always breed nimbleness and quick responses to fast-paced change. Still, cities are working toward modernization. The Seattle Department of Transportation's **New Mobility Playbook** provides guidance for bringing transportation agencies into the 21st century, including understanding changes in travel patterns and modes, identifying new funding streams as traditional car-oriented revenues decrease, and committing to building staff capacity to evaluate trends and opportunities using data.

Particularly in developing cities, it will be critical to identify and lift up political champions who understand that private mobility services have public impacts and that it is the government's responsibility to protect the public interest. Collaboration between government and the private sector should be incorporated as an integral part of efforts to better manage TNC operations, but it can also be helpful for the private sector to better understand how government agencies operate and the motivations behind certain regulatory approaches. Cities are having some success building relationships with operators, like in San Francisco, where city and county staff meet periodically with Lyft and Uber's government affairs representatives to understand new services before they come online. Government staff have been able to communicate their **Guiding Principles for Emerging Mobility**—a framework to meet city goals and evaluate emerging services and technologies—with both operators.[41] These types of ecosystem-building efforts could also include a broader range of stakeholders, including academics, nongovernmental organizations, community advocates, and related government agencies, to provide a more holistic understanding of how proposed policies and services might affect these groups.

Enforcement mechanisms are a critical piece of TNC regulations and should be clearly communicated to operators at the outset. Appropriate penalties (warnings, fines, etc.) should be set for non-compliance, and enforcement should be swift, certain, and fair across all permitted operators. Any revenue generated from penalties should be directed to a transparent location, such as the general fund, to help facilitate trust in the system. On-the-ground enforcement officers could be implemented to help shift the burden of enforcement from local police and parking authorities. These enforcement officers should be compensated through TNC operating fees or other funds, not revenue from penalties, to avoid incentivizing over-enforcement.

41 Warren Logan, Personal interview (2018)

DISCUSSION & NEXT STEPS

In assessing TNC policies against our policy framework, it is clear that there are many practices, but few best practices. Few, if any, policies include all four critical regulatory elements—pricing to incentivize shared trips, metrics for evaluation, data requirements for monitoring and enforcement, and regional coordination—and many are limited by structural challenges that have proven difficult to overcome.

While we recommend that all four critical regulatory elements are included in a city's TNC regulations, implementing those elements will require more detailed guidance and understanding of local conditions and capacities, which is outside the scope of this report. Next steps could include developing this guidance, particularly for more comprehensive pricing of all vehicles, like VKT fees or congestion pricing. However, delaying action and continuing to allow TNCs to operate unregulated sets a precedent that private mobility companies will not be required to compensate cities for their use of public space and leaves revenues and data on the table that could significantly improve the functionality of the broader transportation network.

Major structural challenges must be addressed so that cities are better positioned to design and implement comprehensive TNC regulations. Proposed recommendations to address those challenges are summarized again here:

Challenges to Designing and Implementing TNC Regulations

STRUCTURAL CHALLENGE	RECOMMENDATIONS
Lack of political will	• Consider how clear, outcome-oriented regulations that extend to all for-hire vehicle operators could level the playing field between incumbents and new entrants • Convene public and private stakeholders to understand concerns and how best to position TNC services to achieve broader mobility and accessibility goals • Integrate TNC regulations into larger efforts to pilot new technologies or pursue innovative applications of those technologies
Legal authority restrictions	• Identify opportunities to contribute to draft TNC regulations by collaborating with the level of government that has regulatory authority • Work with other municipalities to request devolution of power from higher levels of government • Identify opportunities for sustained capacity building and intergovernmental collaboration
Governing capacity	• Reframe approach to mobility service provision • Review and update outdated transportation plans and siloed departmental structures • Identify and support political champions working to balance private service provision with public interests • Set clear enforcement protocols

While not covered in the scope of this report, deeper analysis and understanding is needed of the impacts of TNCs on labor markets, particularly in developing cities where driving for TNCs (which circumvents the rigors of organized labor and unions) has made it easier for people to access the job market. However, the “gig economy” model of recognizing drivers as independent contractors (as opposed to employees) allows TNCs to skirt providing protections and benefits otherwise required by state and federal laws. As cities develop their regulatory strategies, local legislators should ensure that TNCs comply with existing labor standards.

Similarly, safety standards for TNC vehicles and drivers, including licensing, background checks, insurance, and conduct, require thorough evaluation. The personal security of riders and drivers while engaged in a ride, the personal data associated with their user/driver account, and public safety (vehicle and road safety) are major concerns. Cities have a responsibility to protect drivers and passengers from harm while traveling on city streets and should evaluate the costs, risks, and opportunities of various safety regulations. Best practice regulations are beginning to emerge in this area.

Finally, experimentation with and evaluation of different policy levers is needed to better understand which tools are effective and which are not. There is some risk associated with such experimentation; however, there are also risks to taking no action and maintaining the status quo. Administrations should identify the structural barriers they face in adopting strong, outcome-oriented TNC policies that fit into a broader vision for sustainable transportation. Addressing these barriers and developing regulations that include the critical elements of pricing, data, metrics, and regional coordination will help establish models for other cities. Organizations like ITDP and others can help document and share those models globally, so that the many disparate practices we see today eventually become best practices.

APPENDIX A: CASE STUDY MEXICO CITY, MEXICO

RISE OF TNCS IN MEXICO CITY

TNCs including Yaxi, Cabify and Easy Taxi began operations in Mexico City in May 2013, without observing existing regulations.[42] UberBlack launched one month later and, along with Cabify, declared that its operations were legal since they would be considered "private transportation," which involves linking potential riders with drivers through a digital platform.[43] This distinction prevents TNCs from picking up passengers on the street like public transport operators or taxis.[44]

After a successful marketing campaign and user growth, Uber's rise began to generate pushback from existing taxi operators, who took to the streets to protest new TNC services, which they viewed to be illegal and unfair competition.[45] As in other cities around the world, these protests and growing discontent rose to national headlines. In May 2015, Mexico City taxis blocked the streets citywide to demand the prohibition of Uber and other TNCs. Uber capitalized on the traffic generated from these protests, and on frustrations with the low-quality service of existing taxi companies, by offering free trips, quickly capturing thousands of users and establishing demand for its service.[46]

About a year later, in early 2016, minivan shared-transport services were launched by Upperbus and Bussi, both of which offered online ticketing.[47] These companies aimed to serve areas with high concentrations of professional workers, satisfying a need for more efficient, higher quality public transportation. However, these companies were operating outside of existing regulations for privately operated public transport, offering few routes, and keeping largely off the radar of authorities and colectivo operators. By the end of 2016, Urbvan, followed by Jetty, joined the market, offering shared minivan service through a mobile app.

42 Apps para Pedir Taxi desde Tu Movil
43 Uber no es Un Servicio de Transporte Público, es un Contrato entre Particulares: Luis De Uriarte
44 Un Contrato entre Particulares
45 Regulación de Uber no Cabe en La Ley: Taxistas del DF

Timeline of TNC Milestones in Mexico City

	MILESTONE	DETAILS
2013		
May	TNCs launch	Yaxi (regular taxis), Easy Taxi (regular taxis), and Cabify (private vehicles) begin operations
June	Uber launches	Operates quietly and only with high-end private black cars
2014		
March	Uber launches UberX	This cheaper service impacts the taxi market share directly
July	New Mobility Law enacted	Mobility Law does not mention TNCs, only licenses and permits for taxis and private and specialized services
2015		
May	Protest by taxi operators	Uber offers free rides to combat traffic from taxi protests; taxi image is badly damaged
June	COFECE* opinion	COFECE recommends recognizing TNCs as a new transport mode
June	LabCDMX stakeholder meeting	Experts, academics, and others present positions on regulation of TNCs and strategies to improve competitiveness of taxi industry
July	TNC regulation published in Official Federal Gazette	Permitted TNCs are allowed to operate as private transport services; vehicle, driver requirements, and per-trip surcharge are established
2016		
January	UberPool launches	Shared vehicle service creates anxiety for the Mobility Minister because of direct competition with informal transit
November	Urbvan launches	With UberPool as an example of a shared ride service, Urbvan (shared minivans with fixed routes) launches in Mexico City
2017		
September	Secondary Mobility Law bans shared services	UberPool and other shared trip TNC services are no longer legal

*COFECE: Economic Competition Commission

REGULATING TNCs

The Mobility Law of Mexico City (2014) gives SEMOVI the authority to design and implement policies, programs, and public actions on mobility. However, there is no mention of TNCs in the Mobility Law. Initially, the Mexico City government intended to regulate TNCs as public transportation, with permits required for each vehicle, just like taxi services. However, this would not allow for potential improvements to existing taxi regulations, such as physical appearance, vehicle color scheme, and driver training, which could be replaced with more dynamic and self-enforcing mechanisms. For example, the most accurate and efficient reviewers of the quality of TNC or taxi vehicles and drivers are users, who could be encouraged to leave feedback on an in-app rating system.[48] Verified reviews negate the need to assign city officials to conduct consistent driver audits. Thus, it is critical for regulations to reflect and leverage these technology-enabled benefits when appropriate, instead of trying to fit TNCs into taxi-like regulations, which could lead to inefficiencies.

RECOMMENDATION BY COFECE

One of the first policy responses to address TNCs was a recommendation made by the national Economic Competition Commission (COFECE), the Mexican antitrust commission charged with supervising, promoting, and guaranteeing free market competition. The recommendation, directed at governments throughout Mexico but mainly at the mayor of Mexico City, focused on establishing and recognizing TNCs as a new transportation mode, capable of substituting for private cars and fixed taxis. It made specific recommendations on how to regulate TNCs, including regulating fares and limiting the number of vehicles in service by using special plates.[49]

LABCDMX PUBLIC DISCUSSIONS

The government of Mexico City has strived to portray itself as a "city of innovation," one that is inviting and accepting of new technologies and entrepreneurial endeavors.[50] Thus, the COFECE recommendation pushed the Mexico City government to acknowledge the barriers to forcing TNCs into existing taxi regulations and to evaluate other alternatives. The City Laboratory (LabCDMX), a government agency responsible for exploring new technologies, held public discussions to develop a common understanding between TNC operators, taxi drivers and other incumbent operators, government agencies, and other relevant stakeholders around regulating TNCs. Concerns from taxi operators were significant; taxi unions and groups prepared several documents arguing that TNCs were direct competition to them and presented a set of demands to the government. Regulatory goals from other stakeholders are included in the table below.

48 Jaime Aparicio, Personal interview (DATE) Easy Taxi Latin America
49 COFECE press release (2015)
50 Rufino León Tovar, Personal interview (2017)

	TNCs	GOVERNMENT	TAXI UNIONS, INCUMBENT *COLECTIVO* OPERATORS
Primary goal for regulation	Flexible, business-friendly operating environment	Balance demands of incumbent operators; ensure high-quality service for citizens	Level the playing field by applying taxi-like regulations to TNCs
Permitting	Clear permit requirements; reduction of "red tape"	Develop electronic permit for TNCs	N/A
Pricing/payments	No regulation of prices by government	N/A	No cash payments accepted by TNCs
Driver/vehicle restrictions	No limit on number of vehicles in service	Vehicle permit/ hologram, driver certification	Minimum vehicle cost, "0" hologram sticker
Compensation for use of right-of-way	Road use charge (for all vehicles)	City tax on TNC trips	N/A

Source: Interviews with Cabify, Easy Taxi and taxi representatives.

LabCDMX compiled conclusions from the discussions and delivered a set of 10 recommendations to the mayor. The recommendations focused on reducing costs associated with private vehicle use, using data to measure mobility indicators and understand travel demands, improving the environmental monitoring of vehicles, improving and simplifying taxi regulations, developing user rights, improving working conditions for TNC drivers, and analyzing the externalities generated by TNCs. However, only two of these recommendations were taken into account when developing the final regulations.[51]

MEXICO CITY ADOPTS FIRST TNC REGULATIONS IN LATIN AMERICA

Following the recommendations of COFECE and LabCDMX, the Mexico City government recognized TNCs as a "private transportation service" and released an agreement to regulate them.[52] Contrary to other privately provided transport services in Mexico City, the government chose to let the market dictate prices and the number of vehicles and not to regulate these directly. This was considered the first TNC regulation in Latin America.

The main policy goals outlined in the agreement included:

- Maintain cleanliness, security, and comfort of transport services
- Incentivize technology research and development
- Build a new mobility culture, in which non-motorized trips are prioritized
- Prevent traffic accidents
- Decrease negative externalities of urban transport
- Start a digital record of TNC vehicles

51 La Regulación de Uber en la Ciudad de México, la Ganancia de los Consumidores y el Problema Público de la Movilidad
52 Gaceta Oficial Distrito Federal, No. 133 Bis

TNC PERMIT REQUIREMENTS

TNCs must register annually on a **web platform** administered by SEMOVI. This registration carries a fee of MX$4,617.50 (US$244). Drivers must obtain an annual permit, driver certification (from SEMOVI), and a Type A license. Vehicles operating on TNC platforms must be valued at at least MX$200,000 (US$10,570); pass an emissions test and obtain a "0" hologram, which exempts vehicles from Mexico City's "no-drive days"; have four doors, air conditioning, airbags, seat belts, car insurance, and a radio; and display a permit sticker.

STATE OF MEXICO ADOPTS TNC REQUIREMENTS

The population of the Mexico City Metropolitan Area is spread across two states, which set their own rules regarding mobility. In August 2015, after the publication of the administrative agreement of Mexico City, the State of Mexico published its own regulation of TNCs, which only applied to trips with both an origin and destination within the State of Mexico. The state legislation indicated that TNC technology platforms did not provide a transport service themselves but acted as a "solidary counterpart" should a civil liability occur. This regulation also differed from the Mexico City regulation in that it allowed for fares to be paid in cash.

In August 2017, vanpool operator Jetty launched its first shared van route in the State of Mexico. Vanpools were a direct threat to incumbent *colectivo* drivers, who periodically stopped vanpool drivers and forced passengers off vehicles.[53] As a result of these confrontations, traffic police in both Mexico City and the State of Mexico were ordered to stop shared vans and impound the vehicles.[54]

In September 2017, a secondary regulation was issued by the central government of Mexico City without the need for approval by the legislature (similar to an executive order). Although this new set of rules included some of the guidelines for TNC regulation established after the LabCDMX discussions, it rendered shared TNC services illegal.[55] However, the prohibition of app-based shared trips was not enforced during the months following the publication of the secondary regulation. Vanpool companies like Jetty, and other ridesharing services like UberPool, continued to operate.

POLICY ASSESSMENT

Mexico City defined specific goals in its 2015 TNC regulations related to maintaining road safety and passenger security, reducing emissions from the transport sector, developing new technologies, and providing clean and comfortable transport options. However, the local government did not define a framework or baseline to measure the success of the TNC policies it enacted.

53 Ciudad de México te Presentamos Jetty
54 Suspende SEMOVI Operación de Urbvan
55 Reglamento de la Ley de Movilidad del Distrito Federal

DATA-SHARING REQUIREMENTS

Even though the 2015 regulations acknowledge the potential benefits of geospatial travel data and explicitly state the need for TNCs to share data with the government, there are no explicit data-sharing requirements included. However, given the requirement for operators to contribute to the Taxi, Mobility, and Pedestrian Fund, at the very least, the number and length of trips should be reported. LabCDMX is also developing a pilot program for a website that could host mobility information from operators.

EQUITY REQUIREMENTS

The 2014 Mobility Law requires public transportation to be accessible to vulnerable groups, including pregnant women, people with disabilities, and the elderly. For example, the city provides women-only buses, taxis, and metro cars for this purpose. As they provide a public service, 5% of taxi company fleets must be universally accessible. However, there are no specific equity or universal accessibility requirements for TNCs as private transportation in Mexico City.

INTEGRATION WITH OTHER TRANSPORT MODES

According to the 2014 Mobility Law, the Mobility Ministry must promote physical, operational, informative, and payment integration across public transport modes. Since TNCs are classified as private services, these integration requirements are not applicable.

POLICY ENFORCEMENT

The Administrative Verification Institute is responsible for reviewing compliance with TNC regulations and must verify that all commercial vehicles operating in Mexico City have the correct permit, a “0” hologram sticker that exempts them from no-driving days, and the correct license. If these documents are not held or are not accurate at the time of verification, the vehicle is impounded until corresponding fines are paid by the operator.

Interviews with stakeholders show that the extent to which TNC regulations are enforced remains highly uncertain. The 2015 regulations do not include explicit penalties or mechanisms of enforcement beyond the vehicular inspection described above. The secondary regulation, which prohibits app-based shared trips, is also not well enforced since services like UberPool remain available, and vanpool companies have resumed operations.

APPENDIX B: CASE STUDY SÃO PAULO, BRAZIL

MOBILITY IN SÃO PAULO

The São Paulo Metropolitan Region has a highly complex mass transit network composed of metros, trains, and buses. Slightly more than one-third (38.7%) of residents use public transportation for daily trips, compared to 28% of residents who use a private car.[56] São Paulo has a very high motorization rate and is highly congested.[57] Because of investments in road construction and other car-oriented infrastructure, as well as underinvestment in public transit, travel times have been increasing in recent years.[58] In 2017, the average public transit commute took 93 minutes, with 30% of riders commuting more than two hours per day.[59] Compared with 47% in Rio de Janeiro and 48% in Mexico City, only 25% of São Paulo residents live within one kilometer of a rapid transit station.[60]

Taxis are considered a public service in São Paulo and can be provided by either a legal entity, such as a commercial company, or by an independent professional driver.[61] Companies are required to have a minimum fleet of 15 vehicles and a service yard to provide maintenance. According to São Paulo's Municipal Taxi Association, around 34,000 taxis are currently operating in the city. Ninety percent of these (around 30,000) are registered by independent owners and represented by the taxi union, while the rest are owned by nearly 60 taxi companies. The government of São Paulo has not issued licenses for taxis since 1996, effectively limiting the number in operation. For that reason, and because the total number of taxis in operation is capped at one per 700 residents, underground buying of taxi plates emerged, with plates fetching up to US$40,000 in 2016.[62]

RISE OF TNCS IN SÃO PAULO

Brazilian cities have stood out for developing TNC-type technologies even before global platforms such as Uber launched in the country. Easy Taxi launched early on, in June 2011 in Rio de Janeiro, and 99 Táxi (now 99), founded in São Paulo, launched a few months later, providing smartphone-based ride-hailing services using licensed taxis. TNCs working with private vehicles, like Uber, did not launch in São Paulo until three years later, in 2014, and did so without permission or authorization. These platforms quickly gained users and drivers, especially after Uber launched its more affordable UberX service. São Paulo's taxi union responded to this rapid growth with demonstrations that turned violent, claiming that Uber violated competition rules and did not have sufficient safety checks on drivers and vehicles.[63] TNC services using unregistered vehicles were eventually banned by the mayor.

56 São Paulo Metropolitan Region Mobility Survey, 2012
57 TomTom Traffic Index 2017
58 Plano de Mobilidade Urbana do Município de São Paulo 2015
60 People Near Transit: Improving Accessibility and Rapid Transit Coverage in Large Cities
61 Lei no. 7.329
62 Urban Transport XXIII: WIT Transactions on the Built Environment
63 Uber Gets Banned in São Paulo

In response, Uber launched an aggressive marketing campaign, which highlighted frustrations with the quality of existing taxi services. Uber also asked for public support via its app, emails, and printed flyers and offered free rides to continue to expand its influence. Over 300,000 emails were sent to São Paulo congress people in support of the company. The number of registered users during this period reportedly jumped from one million in 2015 to nine million in 2016.[64]

Now there are more vehicles working through app-based platforms than there are registered taxis in São Paulo, and the city is Uber's largest market.[65] Regulation of these platforms in São Paulo has taken a more progressive route than in other cities.

64 Como a relação entre Uber, motoristas e usuários azedou pra valer
65 Número de Carros de Apps Supera o de Táxis em SP, Revela Secretário de Doria

Timeline of TNC Milestones in São Paulo

	MILESTONE	DETAILS
2011		
June	99 Taxi and Easy Taxi launch	Both companies provide a technology-enabled platform that links licensed taxis and users
2012		
December	Individual transport services banned without a permit	Fines set for companies and vehicles that operate on city streets without a permit
2014		
August	Uber launches	UberBlack uses private high-end black cars, launches without permission
2015		
June	Taxi union brings lawsuit against Uber Brazil	Court of Justice bans Uber, prevents download and use of ridesource apps throughout Brazil
December	City Hall approves regulation of on-demand ridesourcing	Consultations on establishing a new transportation model for the city are set to run through January 2016
2016		
January	New municipal rules for taxis implemented	Fines raised for unpermitted vehicles
May	TNC regulation enacted	
June	Cabify launches	Spanish-based app launches “lite” service n São Paulo
August	99 Taxi launches 99Pop	Has lower fares; cash and bank card payments accepted
2017		
October	SPTaxi app launches	São Paulo City Hall launches SPTaxi to compete with TNCs

CONTEXT AND REGULATING TNCS

NATIONAL URBAN MOBILITY POLICY

Published in 2012, Brazil’s National Urban Mobility Policy (NUMP) lays out policy goals including promoting sustainability; integrating transport modes; improving accessibility for children, people with disabilities, and the elderly; developing innovative technologies; and building a National Urban Mobility System. These goals aim to enhance the quality of life of all Brazilians. The NUMP divides transportation into two categories: motorized and non-motorized, with motorized transportation separated into (a)

individual and collective modes and (b) private and public operational models. Under this framework, at a national level, private transportation is recognized and defined as individual transportation provided in private vehicles.[66]

Lower level jurisdictions, such as states and municipalities, are expected to align their policies to the NUMP, which lays out specific responsibilities for each level of government. States are given the ability to tax and are provided incentives to implement the NUMP and provide services in areas outside of municipal boundaries. Municipalities, like the City of São Paulo, are in charge of planning, executing, and evaluating the NUMP, and are directly responsible for regulating individual transport services.

SÃO PAULO'S TNC REGULATORY BODY

The city's Municipal Road Use Committee is responsible for developing and monitoring policies for taxis and TNCs. It sets goals, defines fares, develops registration criteria, and evaluates the success and impacts of regulations using performance indicators. The committee is made up of the transport municipal secretary (president), the finance and economic development municipal secretary, the urban infrastructure and works municipal secretary, and São Paulo's chief executive officer (head of the city-controlled economic development corporation).

REGULATING TNCS IN SÃO PAULO

Municipal law in São Paulo prohibits providing individual paid transport services without a permit. Thus, app-based mobility services can only be provided by companies and vehicles registered in the city of São Paulo and can take two forms: (a) the app or platform, such as Wappa, 99, or Easy Taxi, links users to taxi companies/drivers or (b) the app or platform, such as Uber, MeLeva, or Ponga, links users to a carrier's own registered drivers.

The first description of a TNC appears in 2016 legislation that regulates the use of roads in municipal areas for private economic activity, specifically paid individual transport, carpool, or shared driverless vehicles. This decree was aimed at avoiding inefficient urban road use and is only applied to TNCs. The decree also delegated the authorization of TNCs to the municipal Executive power.

REQUIREMENTS TO OBTAIN A TNC PERMIT

In São Paulo, TNC drivers are not required to own their vehicles nor to obtain a special license plate, which are notoriously hard to get. To obtain a permit, TNC drivers in São Paulo must have:

- Brazilian driver's license
- Vehicle registered in São Paulo (if the vehicle is not owned by the driver, a signed letter from the owner is required)
- São Paulo State Criminal Certificate indicating no criminal record for four years (or driver must present rehab certificate)
- Driver certificate (16-hour driver training certified by Public Transportation Department)

66 Institui as diretrizes da Política Nacional de Mobilidade Urbana, LEI Nº 12.587

- Registration with the Municipal Driver's Record
- Application Vehicle Safety Certificate (TNC must produce inspection records for vehicles to validate that they are functional and have a maximum age of five years (eight if vehicle has an antilock braking system)
- Portable and visible ID

Simultaneously, to obtain an operator permit, TNCs are required to:

- Maintain a record for each driver (safety, comfort, hygiene, and quality)
- Use digital maps to track trip routes and traffic in real time
- Communicate trip fare before the start of the trip and enable electronic payments through its platform
- Ensure fares align with maximums set by the Municipal Road Use Committee
- Enable users to publicly evaluate quality of service
- Provide users with an electronic receipt containing trip origin, destination, time and distance, route map, price paid, and driver ID

If a TNC offers pooled or shared service, it must provide a routing system for shared trips, guaranteeing freedom of choice for users. Shared trips can have a higher total fare, as long as each user pays a lower individual fee than they would pay in a regular service. Pooled services are allowed up to a maximum of four passengers.

ROAD USE CHARGE

To minimize total VKT by TNCs and to adequately price the use of public roads by private transport services, São Paulo's regulations enact a road use charge per kilometer traveled. The pricing scheme requires TNCs to purchase road use credits based on an estimate of bimonthly kilometers driven. Surcharges are then levied on companies that exceed the credited mileage. Total credited mileage includes not only passenger trips but also any distance driven waiting for subsequent trips. This encourages companies to optimize their routing technology to minimize driving distance between trips, reducing severely inefficient "deadhead" miles. Shorter trips could also be incentivized.

The local government can raise the road use charge to disincentivize vehicle travel during peak congestion periods, or it can provide a discount for preferred vehicles, such as electric or wheelchair accessible vehicles, or trips made in underserved neighborhoods. As of March 2018, however, the charge had not been altered. TNCs are required to share data with the city to track the consumption of credits.

REGULATION OF CARPOOLS AND SHARED RIDES

Additional regulations were applied to carpool services (caronas solidarias), which are defined as individual transport that is not carried out for profit, and in which the driver and passenger(s) agree to split costs. Thus, carpool TNCs, such as BlaBlaCar, are allowed to operate as intermediaries between drivers and potential passengers and can charge a

fee for providing that service. Carpool TNCs must register vehicles and users, coordinate the division of costs between the driver and passengers, and take action if restrictions are violated. As mentioned previously, carpool service in São Paulo is only permitted for a maximum of four passengers. There are no vanpool TNC systems in the city because vans were banned in the early 2000s.

DRIVERLESS CARS

São Paulo's TNC regulations preemptively address shared driverless cars by stating that their operation will only be allowed under accredited TNCs. Parking of these vehicles will only be permitted in designated spaces, per the city's master plan. TNCs will be responsible for setting the price of the rental of the vehicle and facilitating payment from the user. Vehicles operating as part of a TNC's driverless service must have designated branding, such as stickers or wraps, that clearly identifies them as driverless to users and traffic agents.

POLICY ASSESSMENT

DATA REQUIREMENTS

TNC data reports must be submitted to São Paulo City Hall and shared with the municipal Executive power through the Mobility Laboratory of the City of São Paulo (MobiLab)[67]. TNCs can choose to submit more detailed trip data to the city in exchange for reporting it less frequently (monthly), or they can submit less detailed data daily. The city must guarantee that users' personal data remains private and confidential. The city has requested the following data be shared:

- Trip origin and destination
- Trip length and distance
- Wait time for the arrival of the vehicle at origin
- Route map
- Price description
- Driver ID number
- User evaluation or rating of the trip

According to conversations with City Hall staff, only data on total kilometers traveled per day for each TNC is being reported. Sharing of the other data listed above is still being negotiated between City Hall and TNC operators.

EQUITY REQUIREMENTS

While no explicit requirements are included, to ensure equitable service provision to all customers, TNCs are required to allot a percentage of the VKT credits consumed per month for use by female drivers. The percentage of kilometers required to be driven by female drivers starts at 5%, then increases to 10% after 18 months, and 15% after 24 months. Failure to meet these percentages results in a fine equivalent to the amount of credits of missing kilometers that would be necessary to reach the baseline percentage, without the possibility of using those credits in future trips.

67 MobiLab, São Paulo

PAYMENT REQUIREMENTS

TNCs are free to set fares, so long as they fall under the maximum value established by the Municipal Road Use Committee. Before a trip starts, the user must be informed of the trip fare. TNCs in São Paulo must also allow for electronic payments, although the regulation does not ban cash payments. An increase in the number of robberies, kidnappings, and murders since cash payments were permitted to continue led Uber to require users attempting to pay in cash to register with their national identification number.[68] The municipal Public power has the authority to supervise and repress unfair fare practices committed by TNCs.

GOVERNMENT REVENUE

The VKT charge on TNC trips has proved to be an important revenue source. According to Uber, São Paulo registers more trips on its platform than any other city in the world, even more than New York and Mexico City.[69] The company reports paying R$495 million (US$150 million) in municipal and national taxes in Brazil in 2017. City data shows that municipal income from TNC kilometer credits in 2017 was budgeted at R$48 million, but the actual income was more than R$85 million, 78% higher than budgeted.[70]

POLICY ENFORCEMENT

Aimed at encouraging compliance, fines were established as part of São Paulo's enforcement strategy. TNC vehicles operating without a permit may be fined R$4,500 (US$1,389), companies without a legal address in the city of São Paulo may be fined R$50,000 (US$15,432), and individual owners/drivers operating without a local address may be fined R$3,800 (US$1,173) and be subject to vehicle seizure until the fine is paid.

Compliance is monitored by municipal and state agents, but it is unclear if there is regular enforcement beyond traffic stops or complaints involving a driver, vehicle, or company violating permit requirements. Comparatively, São Paulo's taxi industry faces more strict enforcement than TNCs. Taxis are restricted from a number of activities, including parking in designated areas, picking up a user 100 meters away from a taxi stand or other fixed site, providing services without a guidebook from São Paulo, and rejecting passengers.

68 Como a relação entre Uber, motoristas e usuários azedou pra valer
69 Uber scrambles to head off Brazil bill regulating ride software
70 Boletim da Receita em Dezembro 2017

APPENDIX C: CASE STUDY CHICAGO, USA

MOBILITY IN CHICAGO

Responsible for oversight of bus and train operation, the Chicago Transit Authority (CTA) operates the second largest public transit system in the United States behind New York City's Metropolitan Transportation Authority. The CTA is supported by a network of commuter rail and bus routes that serve the Chicagoland region. Chicago is one of the few US cities with rapid transit service to two airports.

Chicago taxis operate privately using a medallion system managed by the city. Significant efforts have been made to expand the proportion of hybrid and alternative fuel vehicles within the overall taxi fleet, and these vehicles now account for over 80% of taxis. A 2012 overhaul on taxi regulations aimed to improve service by raising the initial hire fee, requiring credit card readers and GPS in every vehicle, and limiting the age and total mileage of vehicles. Additional reforms made in 2014 were aimed specifically at boosting driver income by lowering credit card fees passed on to drivers, improving advertising leases, streamlining new driver training, and collaborating with Business Affairs and Consumer Protection (BACP) to better communicate enforcement rules. The 2014 reforms also called for a universal smartphone app that would show all available taxis and directly compete with TNCs.[71]

RISE OF TNCS

Uber launched its original black car service in Chicago in 2011 with high expectations for how the platform would perform in the city. The combination of cold, windy weather with established nightlife and sports scenes was expected to generate high demand for Uber. Lyft launched in Chicago in 2013, its fourth city. That same year, Uber launched its UberX service and by 2015 had over 20,000 active drivers making more than two million trips per month.

By this time, the city had adopted initial regulations on TNCs, but discontent continued to mount between TNCs and the city taxi sector. To level the playing field, the city proposed moving taxis onto a universal taxi app to compete with the convenience of TNC booking platforms. Launched in 2016, Chicabs linked potential taxi users with drivers using one of two platforms. However, also in 2016, the city approved TNC pickups at designated locations at both Chicago airports, where previously only drop-offs could be made by TNCs. This move was seen by the taxi industry as a failure by the city to provide a fair operating environment.

71 Mayor Emanuel Introduces Innovative 2014 Taxi Driver Fairness Reforms

REGULATING TNCS IN CHICAGO

The City of Chicago refers to TNCs as TNPs (transportation network providers), which are managed by the city's BACP department. TNC regulations were adopted in September 2014 and amended in January 2017.

REQUIREMENTS FOR VEHICLES AND DRIVERS

Chicago requires TNCs to hold an annual operating license (which holds a fee of US$10,000), conduct background checks on and train drivers, inspect vehicles used on their platforms, and obtain insurance.[72]

Rideshare drivers must acquire a TNP chauffeur license, which is attained through an online course and must be renewed annually.[73] The 2017 update established that drivers are no longer subject to a drug test or physical exam; however, if a customer files a complaint, the city license commissioner can request that the driver submit to those tests. The 2017 ordinance also capped driver working hours to 12 within a 24-hour period.[74]

REQUIREMENTS TO SAFEGUARD USERS

The 2017 ordinance sought to improve communication between TNC users and the city and required that signage displaying the "311" non-emergency contact phone number and website be clearly visible to passengers in all TNC vehicles.

PRICING AND REVENUE GENERATION

Chicago's TNC regulations add multiple fees to TNC trips, the revenue from which supports different city programs. TNCs are required to pay a US$0.02 administrative fee per ride, which cannot be passed on to passengers. A US$0.10 fee is also added to all trips made in a non-accessible vehicle. Revenue from this fee is designated for improving TNC *and* taxi accessibility by expanding the number of approved accessible vehicles. In 2015, Chicago became the first city in the United States to assess a fee on each TNC trip dedicated to transit improvements. A Ground Transportation tax of US$0.55 per trip (increasing to US$0.60 in 2019) must be paid to the city. TNC trips to high-volume destinations, such as either of Chicago's airports, the convention center, and Navy Pier (an iconic tourist attraction), are assessed a significantly higher Ground Transportation fee of US$5.55. Ground Transportation fees totaled just over US$17 million in 2015, with 47% of that revenue coming from Uber and Lyft.[75] In 2016, that total increased by over 250% to nearly US$60 million, with 81% coming from Uber and Lyft. Starting in 2018, an annual sum of US$16 million from Ground Transportation fees has been designated to the CTA to support transit improvement projects under the city's FastTracks program. The remaining revenue goes to the city's general fund. City taxis are also subject to a Ground Transportation tax, albeit at the much lower rate of US$98 per taxi per month.[76]

72 City of Chicago Rules: Transportation Network Providers
73 Chicago passes new rules on Uber and Lyft
74 City of Chicago Rules: Transportation Network Providers
75 Aldermen Make a U-turn on Ride-sharing Fees
76 Municipal Code of Chicago, Ch. 3-46

POLICY EVALUATION

DATA REQUIREMENTS

Licensed TNCs must submit travel data to the city monthly, in a format designated by the BACP. Required data to be submitted includes trip origin and destinations (for trips that begin or end in Chicago); vehicle make, model, and registration; driver details and eligibility; trip requests; and traffic crashes involving a TNC vehicle while in service. The BACP may also request real-time GPS data on vehicle locations and other granular data that operators will then have to submit.[77]

EQUITY REQUIREMENTS

TNC platforms must be able to facilitate requests for wheelchair accessible vehicles. TNC vehicles that will be used to serve riders with disabilities must be inspected by the city for compliance with the Americans with Disabilities Act and display an accessibility symbol, and drivers of those vehicles must complete additional training.[78]

The city offers a Ground Transportation tax credit to TNCs that pick up and drop off in areas designated by the BACP as being "underserved by other transportation modes." Each month, TNC operators can apply to have their Ground Transportation tax payment partially reimbursed. For each trip that starts or ends in an underserved area (up to 15% of the company's total monthly trips), 50% of the tax will be credited to the TNC. TNCs must keep logs of the date, time, origin, and destination of all credited trips, which can be consulted in an audit or other investigation. While this credit aims to encourage TNCs to provide service in all areas of the city and reward those committed to doing so, the submission process is arduous.

INTEGRATION WITH OTHER TRANSPORTATION MODES

In recognition of concerns that TNCs may be pulling riders away from public transit, a portion of the per-trip Ground Transportation fee now directly supports transit improvements. This is now a crucial funding stream for the CTA, given that the State of Illinois has significantly decreased capital support for transit-related projects over the past decade.[79] However, the flat fee per trip does not differentiate between shared and non-shared rides, missing an opportunity to incentivize higher occupancy rides through lower fares. There may also be opportunities for partnerships between TNCs and transit as first-/last-mile solutions that make transit a more convenient option. In 2016, Metra, Chicago's commuter rail operator, partnered with Uber to market ground transportation to and from its suburban stations, where last-mile options are minimal.[80]

77 City of Chicago Rules: Transportation Network Providers
78 Ibid.
79 Chicagoland Transit Agencies are Asking for the Capital Funding They Deserve
80 Uber Signs $900,000 Deal with Metra

POLICY ENFORCEMENT

Chicago has some of the strictest requirements for background checks on TNC drivers in the United States, and enforcement has been narrowly focused on ensuring those checks are carried out in alignment with the 2017 TNP ordinance. In 2018, Uber, Lyft, and Via all settled allegations that they conducted background checks that did not meet city standards, and they paid a combined US$10.4 million in fines. That revenue was invested by the city in youth mentoring programs focused on reducing violence.[81]

81 City of Chicago Rules: Transportation Network Providers

APPENDIX D: CASE STUDY LONDON, UNITED KINGDOM

MOBILITY IN LONDON

London has been a global leader in public transportation for decades, known by most for its iconic Underground rail system. The Underground is supported by networks of buses, trams, commuter rail, light rail, and ferries. Public transportation accounted for 36.7% of trips in London in 2016. Demand for public transportation since 2000 has grown by 64%—vastly outsizing the population growth of 21% during that period—which reflects a trend toward more sustainable mode share in the city. On average, sustainable mode share (walking, biking, and transit) accounts for 62% of trips. A citywide goal of 80% of trips made by sustainable transportation has been set for 2041.

The city's private transportation market, characterized by its black cabs, is also extensive, accounting for 36.5% of all trips—nearly identical to the share of trips by public transportation.[82] An estimated 3,000 private hire vehicle (PHV) operators, such as the upscale but reliable Addison Lee and countless other less expensive, less reliable minicabs, supplement the black cabs. In 2011, early technology-enabled platforms like Hailo (now mytaxi) began to emerge in London, linking registered taxis and potential passengers.[83] However, the number of taxis and drivers has been declining for years, with 24,487 drivers in 2016, the lowest number since 2008. Conversely, PHV drivers have exploded since 2008, seeing a 17% increase from 2015 to 2016, to a reported 117,712 drivers in 2016.[84]

London is one of the few cities in the world with a congestion charge applied to vehicles driving in the central zone. Adopted in 2003, the policy aimed to reduce traffic and vehicle emissions in downtown London while generating revenue to support the city's public transportation system. Despite a 10% reduction in traffic volume and an 11% reduction in VKT since 2003, traffic speeds have continued to slow over the years since the congestion charge was enacted. This has been attributed to a general increase in development activity but could also be related to the growth of the PHV sector—in particular, the rise of TNCs—which are currently exempt from the charge.[85]

RISE OF TNCS

When Uber launched in London in mid-2012, on the heels of the Great Recession, it was largely seen as an economic driver, offering people a flexible way to generate additional income and providing lower cost alternatives to cash-strapped travelers. Uber's launch in London—the company's 11th market—also coincided with the city's hosting of the Summer Olympics.

About a year later, Uber launched its even less expensive UberX service, undercutting black cabs and PHVs. This led to several congestion-inducing anti-Uber protests led by thousands of black cab drivers, during which downloads of the Uber app spiked. By the end of 2014, the London Assembly announced that existing regulation of the entire PHV sector (which includes Uber and other TNCs) was inadequate. Throughout 2015, legal

82 Travel in London: Report 10
83 How Uber Conquered London
84 Travel in London: Report 10
85 Congestion Charge: Discounts & Exemptions

battles with PHV companies and Uber's own drivers plagued the company. In September 2016, the recently elected mayor of London, Sadiq Khan, proposed new taxi regulations, including more difficult driving exams and a controversial English language certification and required private hire drivers to hold commercial vehicle insurance—a significant operating cost.[86]

One year later, in September 2017, London's transportation department, Transport for London (TfL), banned DiDi-backed Taxify from launching in the city. TfL also declined to renew Uber's license because of concerns about the company's ability to ensure user safety and for "greyballing" its data to evade government monitoring and oversight. By this time, Uber reported having over 40,000 drivers and 3.5 million users in London.

REGULATING TNCS IN LONDON

MAYOR'S TRANSPORT STRATEGY

Drafted in 2017 and adopted formally in 2018, the Mayor's Transport Strategy aims to reshape the streets of London to make them function better for people. Active transportation, public transit, housing, and jobs are major focuses of the strategy. To improve livability and the efficiency of streets, an overarching goal is to reduce traffic congestion by 10–15% by 2041, and the city has identified reducing dependence on private vehicles as a critical piece.

TNC REGULATIONS IN LONDON

The Transport Act of 1985 identifies when and how taxis and PHVs can provide shared service and thus authorizes TNCs to operate. Specifically, PHVs are permitted to carry multiple passengers paying separate fares as long as passengers book their trip in advance and agree to the shared ride and associated fare. London passed the Private Hire Vehicles Act in 1998, which licenses private hire operators, drivers, and vehicles.

Regulation of PHVs in London began in 2003, when TfL was made responsible for PHV licensing and oversight. PHV operators were initially required to keep a record of driver's licenses, insurance, and vehicle details for its fleet. Operators were also responsible for keeping records of bookings, passenger information, and fares. PHVs can only be booked directly through the operator and cannot be hailed by passengers on the street.[87] TNCs operate within the PHV license framework.

TfL heavily stresses the importance of safety in its approval of licenses for PHVs and, by extension, TNCs. For example, TfL announced in September 2017 that it would not renew Uber's license to operate, citing concerns about under-reported criminal offenses and lax background checks. This move was intended to force Uber to reevaluate its business model, offer better employment conditions for drivers, and improve safety and security for users. Uber was permitted to continue providing service while moving through a lengthy appeal process, and the company launched a campaign asking riders and drivers to sign a petition in support of Uber continuing operations in London.[88] In June 2018, Uber was awarded a 15-month probationary license after making serious changes to its practices, including appointing new management in the United Kingdom, proactively

86 How Uber's Tumultuous History in London Resulted in it Being Banned
87 Abstract of Laws: General guidance on private hire vehicle law for London's licensed private hire vehicle drivers
88 Uber Stripped of London Licence due to Lack of Corporate Responsibility

reporting criminal incidents, and ensuring drivers were properly licensed. TfL sees its use of regulatory oversight as a success, ultimately resulting in Uber improving its service.[89]

In February 2018, TfL proposed updated rules for TNCs that expand TfL's focus on safety and call on operators to align with safety, sustainability, and accessibility goals laid out in the Mayor's Transport Strategy. These updated rules seek to:

- Enhance accessibility by requiring a minimum percentage of wheelchair accessible vehicles to be available in an operator's fleet
- Improve understanding of systemwide travel patterns and impacts of PHVs by requiring operators to share data with TfL
- Improve driver conditions by requiring operators to ensure reasonable working hours with scheduled shift breaks for drivers and other fair employment practices
- Enhance user awareness by requiring operators to display signage indicating that vehicles are properly licensed and providing clear contact information to report feedback[90]

The proposed updates would also change existing English language requirements for PHV drivers. From October 1, 2018, PHV drivers not from a majority English-speaking country have needed to provide proof of B1 level English on the Common European Framework exam.

POLICY EVALUATION

DATA REQUIREMENTS

TfL does not currently require PHV (or TNC) operators to share data with the city. However, citing recent ridership declines on public transit, the agency is considering a data-sharing requirement as part of new licensing regulations to better understand how and why users are choosing private transportation alternatives. In the meantime, Uber has voluntarily added London to its Movement platform, which provides insights on travel times and can show impacts of traffic and other delays on trips.[91]

CONGESTION CHARGE EXEMPTION

Coupled with transit, cycling, and other shared mobility offerings, PHVs (and TNCs) may help reduce the need to own a vehicle in London. TNCs are currently exempt from the city's congestion charging scheme; however, transportation authorities are considering removing the congestion charge exemption to more strongly encourage non-motorized modes, and shared rides when vehicle trips are necessary. Increased revenues generated from PHV congestion fees would help TfL improve—and perhaps attract riders back to—public transit.

89 Uber wins 15-month probationary licence to work in London
90 Policy statement: Private hire services in London
91 Uber Offers to Share Journey Data with London City Planners

INTEGRATION WITH OTHER TRANSPORTATION MODES

Responding to historic lows in bus ridership and network coverage, TfL has been working closely with Ford and third-party trip-planning app Citymapper to provide pilot bus-like services on the outskirts of London.[92] In an effort to expand options for higher occupancy, shared transport, TfL is considering additional opportunities for demand responsive bus services, ensuring that regulations are consistent with PHV regulations.[93]

POLICY ENFORCEMENT

Since 2016, London has deployed 250 on-street compliance officers to ensure that taxi and PHV drivers and vehicles comply with city regulations. In May 2018, officers were given expanded authority and additional training to conduct road stops without a police officer present. This should enable compliance officers to step up enforcement without the need to increase police resources. Compliance officers are authorized to stop a vehicle to check the driver's insurance and license and to inspect the vehicle for damage or defect. Low-level, first time offenses will likely result in a warning; however, subsequent offenses could lead to prosecution and/or licensing review.[94]

92 Could Uber Run the London Bus Network? It's Complicated
93 Ibid.
94 Taxi and Private Hire Enforcement Policy

APPENDIX E: INFORMATIONAL INTERVIEWS

We extend sincere thanks to the following experts who shared their knowledge and experience as background for this report. In addition to those listed here, interviews were conducted with representatives from the incumbent taxi sectors in Mexico City and São Paulo who requested to remain anonymous.

Jaime Aparicio, COO
Easy Taxi Mexico

Laura Ballesteros, Former Undersecretary of Mobility Planning
Mexico City Ministry of Mobility

Kayli Cappucci, Government Relations
Easy Taxi Brazil

Miguel Abad Carillo, Former Global Head of Public Policy
Cabify Mexico

Drew Cooper, Transportation Planner, Technology, Data, and Analysis
Warren Logan, Senior Transportation Planner
San Francisco County Transportation Authority (SFCTA)

Ramon Escobar, Former Country Managing Director
Easy Taxi Mexico

Onesimo Flores, CEO and Founder
Jetty.mx

Yolisa Kani, Head of Policy South Africa
Uber

Juliana Minorello. Former Legal and Public Policy Director
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Renato Picard, Co-Founder
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