

FLORIDA DEPARTMENT OF TRANSPORTATION

# Transportation Network Companies and Public Transit Agency Partnerships



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# Executive Summary

In a country where the popularity of Transportation Network Companies (TNCs) is increasing, Public Transit Agencies (PTAs) have historically considered them a rival. The trend however has started to change, with both parties realizing that partnering could be mutually beneficial. This report aims to assess the types of roles TNCs can fill for PTAs, how TNCs can be effectively regulated, and how PTAs can reprioritize resources when inefficiencies can be effectively covered by TNCs.

In this report, there are three main TNCs: Uber, Lyft, and Via. All three companies have been operating in the United States since early 2010. They have since generated hundreds of partnerships between their services and PTAs in that time. In addition to rideshare services, TNCs have begun to add other services, such as scooter and bike shares, food delivery, and freight transportation.

The Department of Transportation (DOT) Federal Transit Administration (FTA) Code 300-3.1 defines TNCs as “a corporation, partnership, sole proprietor, or other entity, that uses a digital network to connect riders to drivers affiliated with the entity in order for the driver to transport the rider using a vehicle owned, leased, or otherwise authorized for use by the driver to a point chosen by the rider; and does not include a shared-expense carpool or vanpool arrangement that is not intended to generate profit for the driver”. When it comes to creating partnerships with TNCs, PTAs have to consider the requirements and restrictions that come with FTA funds, including procurement, drug and alcohol testing, Americans with Disabilities Act compliance, National Transit Database documentation, and Title VI requirements.

Regulation at the state level can cause even more confusion. Different states house TNC regulating bodies under different departments, including Public Utility Commissions, Departments of Motor Vehicles, Departments of Transportation, Licensing and Regulation Departments, and Departments of Revenue. There are two types of enabling legislation applied in the US. The first is statewide legislation that outlines how TNCs will operate within their boundaries, and the second is legislation that outlines only the insurance requirements of TNC operators.

Metropolitan Planning Organizations (MPOs) typically act as conveners and/or informers of best practices to help local jurisdictions make educated decisions. The powers of local jurisdictions to regulate TNCs within their own boundaries depends entirely on the state legislation.

Currently, the United States funds transit improvements at a far lower rate than roadway infrastructure. This coupled with development that lacks high enough density for transit to operate efficiently has created a situation where residents wanting to use transit cannot access it.

Solutions have been found within the framework of a TNC-PTA partnership to address this problem. These include first and last mile rides, gap service, micro transit, paratransit, modernization of fleets, reducing parking congestion at stations, promoting alternative modes of transportation, addressing budget limitations, and the temporary removal of vehicles from PTAs’ networks. Other targeted program solutions include providing extra capacity for special events, geographically restricted subsidies, service interruptions, labor dispute stoppages, off-hour service, suburban transit solutions, improvement of integration in the transportation system, and stimulate economic development.

# Executive Summary

The future holds even more landscape-changing technologies from TNCs, including Mobility as a Service (a unified app that helps people travel across all modes of transit), Air Taxi Rideshare (electric Vertical Takeoff and Lift vehicles that are seen as solutions to travel from suburbs to urban cores without experiencing congestion), and autonomous rideshare (an eventual goal all TNC operators see as a key to high profitability).

This report also contains a section on best practices for regulations. Some regulations that states can adopt include uniform insurance requirements, biometric background checks for drivers, reasonable licensing fees, enforcement of driver record license restrictions, and uniform rules of conduct for drivers. Local or regional regulations can include setting fares, consistency and transparency enforcement, setting entry limitations on the number of permits, and assessment of supply and demand expectations. This section also includes suggested performance measures for licensing, trip information, safety and discrimination, and fare setting.

Lessons learned from the research in this report outline how a PTA should structure agreements with TNCs, including requiring data provisions from the companies to the PTA, setting performance measures, and reprioritizing funding from inefficient functions to other duties, such as accessibility, ADA, and Title VI services. This section also outlines how partnership would be funneled from local PTAs to their FDOT Regional Office and eventually to the FDOT Central Office.

# Introduction

The transportation industry has changed drastically in the last decade due to the development and rapidly widespread use of new technologies such as smartphone and smartphone applications. From this cultural shift, Transportation Network Companies have emerged and leveraged technology to provide digitally operated transportation services. Travelers can now replace their car with a phone that grants them access to a host of transportation options. Examples of TNCs are Uber and Lyft who control a large portion of the TNC market. TNCs have become gamechangers by improving accessibility for various demographics, contributing to economic growth, and solving transportation challenges for individuals who would not be able to travel without TNCs.

TNCs have leveraged technology to meet transportation needs and demands in the US and countries globally. With the growing need for improved transportation infrastructure, services, and accessibility it becomes important for cities to invest in innovative solutions without compromising on quality while cutting costs.

Many cities across the US already have TNCs operating within them. However, regulation and understanding of how to leverage the power of TNCs to solve the transportation challenges of certain cities has yet to be explored. TNCs thrive in densely populated cities. Areas with low density, fragmented accessibility and connectivity, and gaps in transit service areas do not benefit as much from their services. Currently, the fixed routes of metros, buses, and trains also do well in densely populated cities. Low-density areas in cities on the other hand often are neglected. This is due to upholding ROI on transportation infrastructure projects and services since they typically are expensive ventures with limited budgets. Often transit agencies will not expand into low-density population areas because of the lack of adequate ridership to justify expensive transportation infrastructure and service projects.

Partnering with TNCs makes sound financial sense for cities. By reducing costs, it allows their budgets to be used for more impactful transportation infrastructure and service projects. In turn, TNCs themselves have not been profitable servicing low-density populated areas. Therefore, partnering with cities would allow them to provide services to such areas while keeping costs affordable for their ridership.

Creating partnerships with TNCs can enhance and complement transit services by helping city transportation agencies expand beyond their current reach. It would keep transportation costs affordable, maintain quality, and regulate the operations. Several successful TNC partnerships exist in the US and can be replicated here in the State of Florida.

The purpose of this report is to illustrate the national state of PTA-TNC partnerships in the United States. By providing a national inventory of consolidated information, it serves as a guidance to local and regional PTAs on the potential organizational structure and regulatory framework of partnerships with TNCs. Collecting and distributing this information will help the Florida Department of Transportation better position themselves to respond to changes in the transportation industry that could impact its own efforts and goals towards building stronger cities.

# Current Landscape

## Existing Transportation Network Companies (TNCs)

Transit agencies often rely on partnerships with private companies to operate both fixed route and paratransit services and decrease their operating costs. In the last decade, however, a new trend of private mobility service providers has emerged completely independent of transit agencies. These new service providers are known as Transportation Network Companies (TNCs). Originating from the technology sector, they developed organically from peoples' perspective to meet individual needs. What makes TNCs unique is their ability to leverage mobile technology and digital platforms to connect users with mobility options. The use of this technology increases the efficiency of providing of transportation services. This ease and convenience has led to rapid and widespread use within the mainstream population. One 2017 report from the University of California Davis Institute of Transportation states that 21 percent of adults in major U.S. cities had used a ride-sharing service at least once, while 15 percent used them on a weekly or daily basis. One of the first TNCs, Uber, was created as an alternative to assigning a designated driver on a night out when transit services were typically not available. TNCs first started in urban areas as an economically efficient alternative to traditional taxis then expanded to suburban areas. Now by collaborating with public transit agencies, TNCs are further expanding.

Transportation Network Companies (TNCs) are defined below according to Florida Chapter 627.748:

“Transportation network company” or “TNC” means an entity operating in this state pursuant to this section using a digital network to connect a rider to a TNC driver, who provides prearranged rides. A TNC is not deemed to own, control, operate, direct, or manage the TNC vehicles or TNC drivers that connect to its digital network, except where agreed to by written contract, and is not a taxicab association or for-hire vehicle owner. An individual, corporation, partnership, sole proprietorship, or other entity that arranges medical transportation for individuals qualifying for Medicaid or Medicare pursuant to a contract with the state or a managed care organization is not a TNC. This section does not prohibit a TNC from providing prearranged rides to individuals who qualify for Medicaid or Medicare if it meets the requirements of this section.

Several TNCs currently operate in the United States. They have completely transformed the transportation landscape. They have impacted mobility choices through the creation of a new industry within what is now known as the digitally enabled “sharing economy”. The U.S. Department of Transportation defines the “sharing economy” as “a developing phenomenon based on sharing, renting, and borrowing goods and services, rather than owning them [GOA].” The sharing economy provides new alternatives to the long-established transportation industry. The following sections detail a few of the most widely used TNCs in the U.S.

- **Uber**

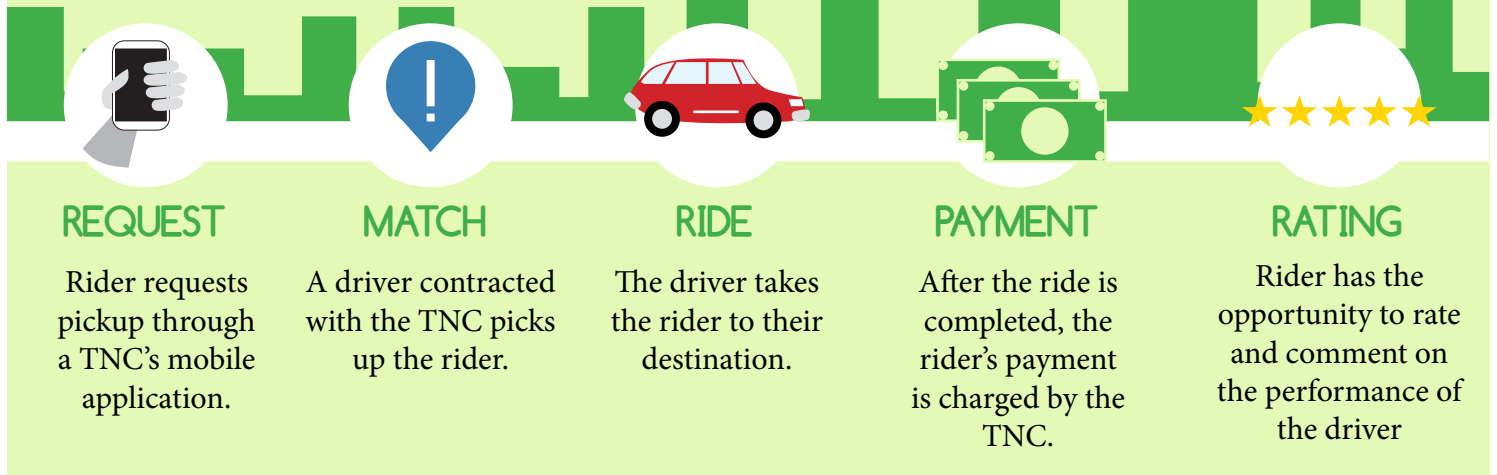
Uber is the largest and most popular TNC in the United States. With a 70% market share, it operates in more than 700 cities internationally. Founded in 2009, just ten years later Uber is estimated to have a private valuation of almost \$50 billion.

- » **Operation**

Uber operates via a smartphone application that allows users to virtually ‘hail’ a ride by identifying their destination and selecting from several types of vehicles. Rides are covered by commercial liability insurance. Once the user ‘hails’ the ride, their GPS location is sent to the driver. The user can then see how many minutes away the driver is and follow his journey. Drivers are independent contractors and usually operate their own personal vehicles for the service (although agreements do exist with rental companies for the driver to obtain a vehicle). Requirements for drivers vary depending on jurisdiction. Most local governments obligate drivers to meet requirements for age,

# Current Landscape

## How Ridesharing Works



health, car conditions, and to pass a background check. After the journey has been completed, both the driver and the passenger can rate the experience on the app. Both the passenger's and the driver's ratings are also available on the app. Before a ride is hailed the driver and user have the right to refuse a trip based on their ratings [FourweekMBA.com].

### » Service Options

Depending on the jurisdiction and availability, riders can select from UberX, Comfort, UberPOOL, UberXL, UberBlack, UberBlackSUV, and UberLUX. Vehicle types offer a wide range of experiences from a group shuttle to "could be your own car" to elite service in luxury vehicles. Special services offer child safety seats and wheelchair accessibility.

### » Pricing

Passengers are quoted a fare before the trip which is based on both time and distance. The fare is dynamic depending on demand and time of day - meaning fares for the same route will be different each time it is requested. Passengers are billed on the app when the trip is completed using the user's preselected preferences for payment (e.g. credit card, ApplePay, Paypal, etc.). Since drivers are independent contractors, Uber charges a commission on each fare. Tipping is optional. This step comes after the rating process in order to prevent passengers receiving negative ratings for not tipping.

### » Partnering with Transit Agencies

Uber's mission statement is to "make transportation as reliable as running water, everywhere, for everyone". Uber primarily provides door-to-door transportation for private customers. It also provides a car-pooling service (UberPOOL) and is now beginning to develop strategies for serving transit passengers. The company has ventured into food delivery, freight, active transportation with bikes and scooters, as well as creating a single platform unifying all of its services with public transportation agencies. In some cities, Uber has begun to integrate public transportation information into its application as part of its long-term strategy to become a go-to service for urban transportation. In London, it has partnered with Transport for London to compile information about buses, trains, trams, shuttles, the London underground, rail lines, and boats into the Uber app. In the company's S-1 filing with the US Securities and Exchange Commission, as part of its Initial Public



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Offering, Uber identifies public transportation as part of its “total addressable market,” a term the company uses for how it can make money over the long term [The Verge, 2020].

## • Lyft

Lyft is the second-largest ride-sharing company operating in the United States after Uber and holds a 29% market share. It currently operates in 644 cities in the United States and Puerto Rico and 12 cities in Canada but has not yet expanded abroad.

### » Operation

Founded in 2012, Lyft operates similar to Uber by using a smartphone app. Rides are covered by an insurance protection plan. The app allows passengers to request a ride from a nearby driver showing the driver’s name, rating, the type of car and a photo of the driver. Unique to Lyft is its sociability. Passengers can personalize their accounts adding information like their hometown, music preferences, and other facts meant to spark conversation between the passenger and driver.

### » Service Options

Lyft offers five types of vehicles: Lyft (original), Lyft XL, Lux, LuxBlack, Lux Black XL. These options offer a variety of vehicle styles and sizes, carrying up to six riders.

### » Pricing

Lyft uses what is called their Upfront Fare Model. This fare is based on four main criteria and the sum of them is equal to the total cost of the trip.

1. Base fare – initial flat fee
2. Minutes – cost per minute of trip time
3. Miles – cost per mile traveled
4. Trust and Safety Fee – flat fee for ‘operating costs’

### » Strategy for Partnering with Transit Agencies

Lyft aims to be a platform for city planning by partnering with municipal governments and transit agencies. The ride-sharing company has already taken steps towards this goal. Partnering with the city of San Francisco, it has created a program that encourages travelers away from Valencia (a popular corridor) by placing Lyft pick-up locations on side streets. At the national conference for the American Planning Association in 2018, Lyft gave a presentation on its strategy for partnering with PTAs. It named a number of features developed to support these partnerships:

- Geofencing
- Timeboxing
- Concierge: Call Center Booking
- Lyft Access Mode
- Prepaid Debit Cards

## • Via

Via is a transportation network company that claims to “offer the efficiency of a private car with the cost savings and congestion-reducing benefits of public transit.” While quickly gaining popularity, the company is still rather small. It operates independently of partnerships in just three cities in the U.S. and three in Europe. The company’s drivers have the choice of being paid an hourly rate or per-trip rate. Drivers that opt for the hourly rate are shown

# Current Landscape

the amount available to them the night before they work [The Rideshare Guy, Via Driver: Why Uber Drivers are switching to Via Rideshare].

## » Operation

Via is distinguishable from Uber and Lyft in that it does not focus on private, single-person trips, but operates primarily as a car-pooling service. As with Uber and Lyft, passengers first use a smartphone application to virtually hail a ride. Then, the digital system groups multiple passengers headed to the same destination area and books them together into one shared vehicle. With this model, it maintains a high utilization rate of 70% compared to Uber and Lyft who have around 58%. However, in this sense, it requires a higher population density to remain economical.

## » Service Options

Via offers one type of vehicle: a black Mercedes van with a 6-person capacity.

## » Pricing

Trip fares are dynamic based on time and demand and are calculated based on distance and the number of additional passengers.

## Expansion: Scooters, Bike-Share, Food Delivery, and Freight

With their profitability recently in question by investors, both Uber and Lyft are looking to expand into different markets to make up for the losses suffered from going public. Their expansion into new markets like micro-mobility, food delivery, and logistics also reflects their ambitions to be more than just a ride-sharing company. They want to be a one-stop-shop for all transportation needs.

## » Scooter and Bike Share

In the realm of fast-growing technology start-ups, scooter- and bike-share companies have also seen rapid growth in the last few years. Globally, this industry has become a fierce competition as many companies race to dominate the mobility market. Recognizing the potential of pairing the sharing economy with technology for alternative modes of transportation, both Uber and Lyft have recently made investments in micro-mobility. 2018 was a big year for acquisitions and partnerships in shared micro-mobility. Uber acquired JUMP, a dockless, electric bike-share system based in Brooklyn. Also, in 2018, Uber integrated electric Lime scooters into its app so that users could more easily access first- and last-mile solutions to their destinations. This came shortly after Lyft bought CitiBike, the biggest bike-share company in the U.S.

## » Food Delivery

In 2014, Uber expanded its business into food delivery, posturing itself as a new competitor to companies like GrubHub. This part of the business has been fast-growing. With a revenue increase of 149% by 2018, Uber Eats is now the largest food delivery service in the western hemisphere [Bloomberg, Eater]. Growth in this business later became an essential part of the company's public offering pitch after growth in ride-hailing showed significantly slower growth from previous years. On the surface Uber Eats is a high revenue endeavor, however a closer look shows net losses in this area as well. Uber states that this is part of a strategy that accepts upfront losses in order to bring more big-name customers to the Uber brand [Eater]. Furthermore, Uber Eats is not slowing down. In 2019, the company confirmed its interest in investing in cloud kitchens, a program that would rent kitchen space to restaurants using its food-delivery app.

# Current Landscape

## » Freight

Continuing its mission to “bring transportation for everyone, everywhere”, Uber expanded into freight and logistics operations in the U.S. in 2017. The Uber Freight app connects truck drivers with shipping companies by listing loads that can be booked straight from a smartphone. Building upon this basic feature, the company developed a personalized load-matching feature that uses smart technology to learn carriers’ preferences based on past loads. Despite overall business losses and a national shortage of drivers in the trucking industry, Uber announced in September 2019 that it would invest another \$200 million annually to strengthen this venture [The Verge].

## Demand Response

The terminology used to describe shared mobility companies is varied and definitions are overlapping. This often causes confusion over the difference between transportation network companies, taxis and demand response services - the latter of which is often used by transit agencies. Furthermore, Uber has been dubbed the ‘modern taxi’. So, what is the difference between TNCs, demand response services, and taxis?

Federal transit regulations (49 C.F.R Section 604.3(g)) define a Demand Response Service as, “any non-fixed route system of transporting individuals that require advanced scheduling by the customer, including services provided by public entities, nonprofits, and private providers. The service is further described as “one where passenger trips are generated by calls from passengers,” and often involve picking up more than one passenger at a time (pooling).

Under this definition, a taxi is defined as a private sector Demand Response System vehicle, and no material has been found to say otherwise. Federal Transit Authority FAQs for Sections 5310, 5316, and 5317 states that “FTA declared taxi companies that provide shared-ride taxi service to the public or a segment of the population as operators of public transportation”. Demand response services are just a subset of the public transportation umbrella [DOT].

As mentioned in the previous section, Florida legislation (Chapter 627.748) defines a Transportation Network Company as a company that uses a “digital network to connect a rider to a TNC driver.” While the service provided by each of these types of shared mobility services is the same, the distinguishing factor of a TNC seems to be its ability to leverage technology (an application) in a way that is not used by Demand Response Services.

Florida legislation also defines a TNC as a company that “provides prearranged rides”. This means that the operation of a TNC involves virtually ‘hailing’ a ride through a digital platform. This is different than a taxi service that can be hailed spontaneously in the urban environment and does not use a digital platform.

## Relevant Legislation and Regulations

The debate over the regulation of TNCs has been controversial from the beginning. These companies are in a regulatory gray area and challenge the traditional regulatory framework for commercial ridesharing services. As immature start-ups, both Uber and Lyft rolled out operations in major U.S. cities without collaboration or communication with local governments. Since transportation has always been a highly regulated sector, cities acted fast to halt these operations. As unregulated entities, TNCs are in conflict with existing regulatory frameworks

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that ensure safety, quality, and supply standards. Fierce opposition from the taxi industry claims that competition with TNCs is challenging because TNCs provide the same service as taxi companies but are not mandated to meet the same stringent regulations that often create obstacles for business profitability and stifle innovation. The cost-efficiency characterizing TNCs is only possible because they have circumvented these regulations. Happy to remain exempt from traditional regulations, TNCs argue that they are not transportation companies but technology companies that facilitate transportation interactions.

Self-regulation does not mean any regulation. It is the reassignment of regulation responsibilities to the company from the government. It allows the digital platform to enforce safety, quality, and other standards. Consumer feedback on the platform helps to mitigate market failure and ensure the quality of service. The competition serves as the motivation to create checks for substandard performance. The freedom allowed through self-regulation creates room for innovation and creativity in business strategies as well as cost efficiency for the consumer. For example, TNCs do not currently operate under geographical restrictions as taxis do. A TNC driver can accept trips that require dropping the passenger off in a different city. When this trip ends, the rider can then accept another trip in that new city. Taxi drivers, however, are restricted from accepting trips outside of their jurisdiction - meaning that the taxi driver would have to drive back with a passenger-less vehicle to the original city.

The argument for traditional regulation is that TNCs are in fact transportation companies and should be held to the same regulatory standards as taxis including extensive background checks, vehicle inspections, licensing requirements, taxi medallions, and jurisdictional boundaries. These regulations were established for the safety of the public and capture unanticipated externalities that cannot always be accounted for through a customer feedback system. The traditional regulations ensure quality and equity of service.

The debate now is whether TNCs should fall under self-regulation or traditional (complete) regulation. Currently, in most states, it falls somewhere in between. Establishing how to regulate TNCs is important for policymakers and planners for the future direction of transportation and integrating technology into transportation systems.

Regardless of regulation, TNCs that partner and work effectively with transit agencies have a greater chance of achieving profitability. Just as the automobile industry benefited from federal and regional agencies that adopted policies and made major public investments in infrastructure, resulting in substantial subsidies, so too can TNCs benefit from collaboration. The viability of TNCs as solely private operations is still uncertain. However, if transit agencies can be convinced that this new kind of mobility has a place in the urban fabric, they are more likely to be successful.

Determining a standardized structure for TNC partnerships is essential in reaping the benefits of collaboration. It has yet to be done. When considering guidance for the structure of TNC partnerships in Florida, several regulations come into play. The regulations below are distinguished by the level of government.

## • Federal

The Federal Transit Authority of the United States Department of Transportation [300-3.1] defines a TNC as follows:

“Transportation Network Company (TNC) – A corporation, partnership, sole proprietor, or other entity, that uses a digital network to connect riders to drivers affiliated with the entity in order for the driver to transport the rider using a vehicle owned, leased, or otherwise authorized for use by the driver to a point chosen by the

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rider; and does not include a shared-expense carpool or vanpool arrangement that is not intended to generate profit for the driver. NOTE: Certain jurisdictions may have limits or prohibit the operation or use of TNCs. Federal employees are expected to follow all laws, including those related to TNCs, as well as choose the most cost-effective level of service.”

Currently, this definition is the only federal legislation specific to TNCs. The federal government is unlikely to have governing power over TNCs due to parameters set by the United States Constitution, which only allow for regulation of for-hire vehicles that engage in interstate commerce. However, in a report by the United States Government Accountability Office, several agencies claimed that certain general federal requirements had had an impact on the implementation of their partnership programs. The categories of requirements cited included procurement requirements, drug, and alcohol testing, American with Disabilities Act (ADA), Title VI of the Civil Rights Act, and data reporting in the National Transit Database.

Public transit agencies looking for guidance on how their TNC partnerships will comply with federal requirements can utilize the resources below that have been made available by the Federal Transit Administration:

- FTA, Dear Colleague Letter (Dec 5, 2016): <https://www.transit.dot.gov/sites/fta.dot.gov/files/Dear%20Colleague%20Letter%20re%20Shared%20Mobility.pdf>
- FAQ website: <https://www.transit.dot.gov/regulations-and-guidance/shared-mobility-frequently-asked-questions>

## » Procurement

Local public transit agencies that receive funding from the Federal Transit Authority (FTA) of the U.S. Department of Transportation must procure any goods or services in accordance with all applicable federal requirements [FTA C4220.1 Third Party Contracting Guidance]. These requirements can be found in FTA’s Best Practices Procurement & Lessons Learned Manual. Procurement requirements have been stated to slow program implementation by adding 6 or more months to timeframes and creating burdensome bidding processes [GAO].

## » Drug and Alcohol Testing

Public transit agencies that receive funding from FTA must comply with requirements for drug and alcohol testing of public transportation employees, specifically those in safety-sensitive roles. This requirement was established through the Omnibus Transportation Employee Testing Act of 1991 [FTA]. It also applies to contractors but is often difficult to comply with when PTAs partner with TNCs that connect the PTA with independent contractor drivers. The FTA has started applying a “taxicab exception” to TNCs. This allows the TNC to be exempt from some requirements in cases where the customer is able to select from multiple providers for the ride [GAO].

## » Americans with Disabilities Act (ADA)

TNCs cannot be funded by federal or state agencies unless they comply with the federal Americans with Disabilities Act, although per Federal Transit Administration guidance, ADA regulations “apply [to transit agency partnerships with TNCs] ...regardless of whether federal funding is involved.” Accessibility for the disabled of shared mobility services like Uber and Lyft is a hit or miss. Accessibility of the applications varies widely by both company and the operating system of the user (e.g. Apple vs. Android), with text-based elements working sufficiently well (e.g. the vehicle’s ETA), while map functionality is less than satisfactory.

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Vehicle accessibility also varies by both the company and the city. Wheelchair accessible vehicles are available in large cities like New York and Washington D.C. However, accessibility-related blogs argue that the wheelchair accessibility is not universal and is not always compliant with ADA. It is also difficult to determine which cities offer wheelchair accessibility. Lyft in particular simply provides a list of other companies that offer accessible services, indicating they have few accessible services to offer themselves.

Shared mobility companies, Uber, in particular, have also been accused of discrimination from drivers towards users accompanied by service animals. The National Federation for the Blind has filed a lawsuit against Uber on this issue. In addition, information pertaining to each company's policy on guide dogs is vague and difficult to find. For each company, this information is tucked away in the "Help" section of the website and is not readily available on the app.

## » National Transit Database

Every year, federal grant recipients must submit a package to the National Transit Database that includes data detailing the performance of their project or program. The National Transit Database is the country's primary source for transit systems' information and data. This tool is meant to inform public transportation service planning to understand which operations perform best. The data includes among other things, operating expenses and funding sources, the number of transit stations and maintenance facilities, ridership, and miles traveled. The FTA issues a yearly manual to assist in meeting data reporting requests. This requirement poses two major challenges for PTAs. Firstly, despite FTA's manual, many PTAs have reported confusion in understanding the type of data to report and how to report it. Secondly, the data required by the FTA is often difficult to obtain from TNCs due to concerns about rider privacy and proprietary data.

## • Title VI

State funding requires compliance with Title VI of the Civil Rights Act. This act, "prohibits discrimination based on race, color or national origin in programs or activities which receive federal financial assistance." Transit agencies traditionally address these issues through a dispatch service without a smartphone. If transit agencies wish to use federal funds for subsidization of TNC partnerships, TNCs must also prove compliance with Title VI. In a report from the United States Government Accountability Office on public transit partnerships, eight local transit agencies and two TNCs stated that Title VI requirements had impacted partnerships. For example, two recipients of the Federal Transit Administration's Mobility on Demand Sandbox program reported having to abandon their original TNC partner because the original partner was not able to provide measures such as a call center or cash payment options to help avoid discrimination.

# Current Landscape

## • Other States

While federal legislation is lacking, almost all states nationally and the District of Columbia have adopted their own TNC legislation (see Figure 1 below). This is largely due to the initiative of California’s Public Utilities Commission for having established themselves as the regulating body early on and the aggressive lobbying by TNC companies for relaxed, general state legislation. State regulation is favored by TNCs because states do not always have the enforcement capabilities of local governments. Figure 2 shows the governing agencies for TNC operations in some states.

Fig. 1: States That Have Adopted TNC Legislation

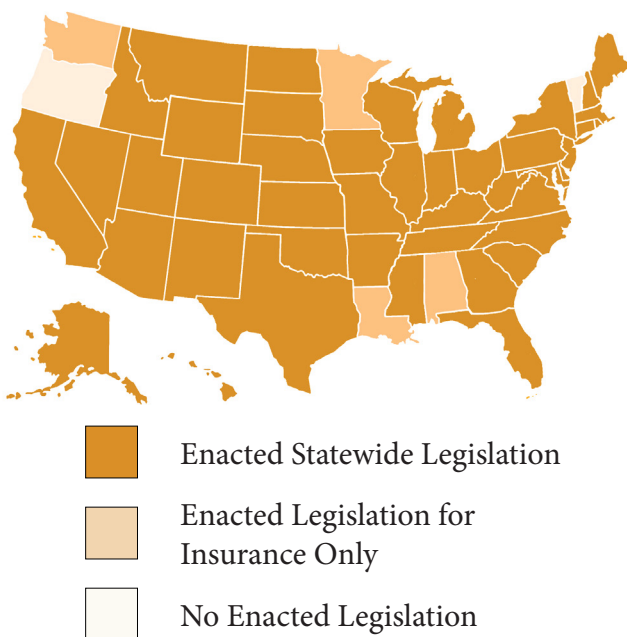


Fig 2: Governing Agencies for TNC Operations in States

State	Governing Agency
AR, CA, CO, KS, MD, NE, PA, NM	Public Utilities Commission (PUC); Public Services Commission (PSC); Consumer Commission (CC); Public Regulations Commission (PRC)
DE, VA, NJ	Department of Motor Vehicles (DMV); Motor Vehicles Commission (MVC)
AZ, IA, LA, NV	Department of Transportation (DOT); Transportation Authority (TA)
MI, TX	Department of Licensing and Regulation
IN, MO	Department of Revenue (DoR)

### » Colorado

Colorado was the first state to adopt a state bill regarding TNC operation (Colorado SB 14-125). This bill created a limited regulatory structure for the operation of TNCs and subsequent regulations (6700-6799). It is considered to be one of the most flexible and least burdensome in the U.S. The companies are permitted, and the regulations upheld through the Public Utilities Commission. As of 2018, there were three TNCs permitted to operate in Colorado: Uber, Lyft, and HopSkipDrive. This “ride-share friendly regulation” exempts TNCs from the regulations for common carries, contract carriers, and motor carriers, but must meet several other requirements:

- \$1 million of primary liability coverage per incident occurrence (filed with the PUC).
- Safety inspections for driver vehicles before approval to use and annually thereafter.
- Personal automotive liability insurance for all drivers.
- Criminal and driving history record check.
- Prohibition of the use of drivers with felony convictions, moving violations, or those under the age of 21.

Under this legislation, drivers also have their own requirements. Drivers:

- Must be at least 21 years old.
- Are limited to 12 hours of consecutive driving.

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- Must display exterior marking indicating that it is a TNC vehicle.
- Cannot perform service unless the TNC platform has matched the driver to a rider (cannot spontaneously pick up the passenger).
- Must provide service regardless of race, ethnicity, gender, sexual orientation, gender identity, or disability.
- Store passengers' mobility equipment in the vehicle for the duration of the ride.
- Cannot refuse to drive a passenger unless the passenger acts unlawful or disorderly, the passenger cannot care for him/herself, or the driver has already accepted a ride for another passenger.

## » California

California has the most structured legislation on TNCs and TNC partnerships. It is governed by the Public Utility Commission (California Chapter 389, Section 1, Article 7). California's regulatory structure for TNCs includes licensing requirements, insurance requirements, driver requirements, zero-tolerance policy requirements, and quarterly and annual fees. The state also requires TNCs to submit a report every September (annually) detailing accessibility, ride details, zero-tolerance complaints, collisions, and miles and hours spent driving.

State Bill 1376 enacted the Accessibility for Persons with Disabilities program. It requires the commission to conduct workshops with stakeholders to determine wheelchair accessible vehicles demand and supply and to provide recommendations for on-demand services and partnerships. The bill mandates TNCs to pay \$0.05 quarterly to the PUC for each completed trip within a specific geographic area. This fee is then put towards the cost of providing adequate Wheelchair Accessible Vehicle service.

## • Regulation by State DOTs

### » Nevada

Nevada passed Senate Bill 554 (SB554) in 2017, which requires that drivers for TNCs hold a valid business registration in order to operate in the state. The bill also requires that companies terminate agreements with drivers that fail to provide documentation. This bill was filed in addition to previous legislation that gave oversight of TNCs to the Nevada Transportation Authority so they may investigate any complaints against the company. Section 2 of SB554 requires the Authority to share the identity of registered drivers with the Nevada Secretary of State in order to enforce the business registration requirement [Nevada State Legislature].

### » Arizona

Arizona Revised Statutes Title 28 Chapter 30 Article 3 created the framework for TNC regulation in Arizona. Arizona is one of several states whose TNC legislation is regulated by the state Department of Transportation. ADOT is responsible for the permitting process, and compliance and insurance requirements.

### » Florida

The regulatory framework for TNC operations in Florida can be found in Florida Chapter 627.748. This legislation distinguishes TNCs from other types of carriers, establishes requirements for drivers and insurance, and addresses drugs, alcohol, discrimination, fares, and record keeping. Section 9 of this chapter addresses the limitations of TNCs by outlining the four-part test of determination for independent contractors.

Within this regulatory framework, local governments establish their own agreements for operation. For example, the Lee County Port Authority has entered into an agreement to operate a TNC on airport property. The Port Authority permits the company to service the airport using an app but does not inspect vehicles



# Current Landscape

or regulate drivers. This regulation is the responsibility of the state. For example, complaints about TNC companies are directed to the Florida Department of Agriculture and Consumer Services.

## • Metropolitan Planning Organizations

The roles of Metropolitan Planning Organizations (MPOs) when it comes to transportation network companies are typically that of convener and informer.

### » Boston MPO

The Boston Metropolitan Planning Organization (MPO) used federal funds to research and explore the management of curbside lanes. The Metropolitan Area Planning Council (MAPC) hosted a forum to inform local governments on lessons learned from partnerships with shared mobility companies. The MPO and MAPC are also advising less populous members in negotiations with shared mobility providers and established a Suburban Mobility Working Group to promote a regional dialogue.

### » North Central Texas Council of Governments (Dallas - Fort Worth)

North Central Texas Council of Governments (NCTCOG) hosted a regional forum for coordination on shared mobility planning and pilot projects with participation from transit agencies, researchers, and TNCs. The NCTCOG also worked to integrate TNC considerations into the organization's Metropolitan Transportation Plan and Regional Transit Coordination Plan. The organization explored ridesharing as a tool to help achieve regional goals, such as transit system expansion, first and last-mile solutions, and increasing average vehicle occupancy [DOT].

## • Local Jurisdictions

While all but one state has now enacted state-wide TNC legislation, the question of how to deal with quickly sprouting TNCs initially began at the local level. Cities quickly moved in with lawsuits against TNCs that began operations without government collaboration or permitting. States only became interested in higher-level regulation after California's Public Utilities Commission assumed regulatory authority over cities in California in 2013. The regulatory authority given to cities varies by state. In some states, like Vermont, legislation prevents local authorities from regulating TNCs but makes exemptions for specific cities.

Other states allow some localized regulations for larger cities like New York, Philadelphia, and Las Vegas. States such as Alaska and Alabama do not allow local government authorities to regulate TNCs but allows them to ban them altogether if they choose. Investigation also shows that Uber and Lyft have undertaken massive lobbying efforts for state-wide regulation over local regulation. This is because state-wide regulation tends to be more general and relaxed compared to city ordinances. For example, Uber and Lyft pulled out their operations in Austin because of local regulations that required drivers to get fingerprint background checks. The companies later returned when Texas state law preempted the local law and removed this requirement.

State law can simplify licensing and insurance requirements and allow TNCs to operate in jurisdictions that have not adopted specific local regulations. However, local governments more often have the knowledge and experience to enact effective policy. For example, both New York City and Portland local regulations contain specific language on providing wheelchair-accessible service in a timely manner, while the state regulations only require the user to indicate on the app that they need wheelchair access. State laws also do not address data collection. Portland regulations also include detailed data-sharing requirements [MobilityLab, Transportation for America]

# Current Landscape

- Other Countries

- » **Canada**

The Canadian national government requires drivers to pay Goods and Services Tax. Legislation has largely been left up to provinces and cities. The Competition Bureau albeit released a paper in 2015 titled “Modernizing Regulation in the Canadian taxi industry”, which called for changes in regulations of both TNCs and taxi companies to ensure fair competition [Government of Canada].

- » **Australia**

The Australian Taxation Office requires drivers to have a business number and be registered to pay Goods and Services Tax (GST).

- » **European Union**

In December 2017, The European Court of Justice ruled that Uber is a transportation company, not an information company as Uber had argued. Thus it was subject to local transport regulation of EU members.

- » **France**

French courts have repeatedly ruled that Uber’s carpooling service, UberPop, was illegal. France also passed the Thévenoud Law in 2014, which requires all chauffeurs to hold professional licenses [Quartz].

- » **Germany**

Uber’s operations in 2014 were ruled illegal because drivers are required to have taxi licenses. The company currently offers rides in Berlin and Munich with licensed taxi drivers [DW].

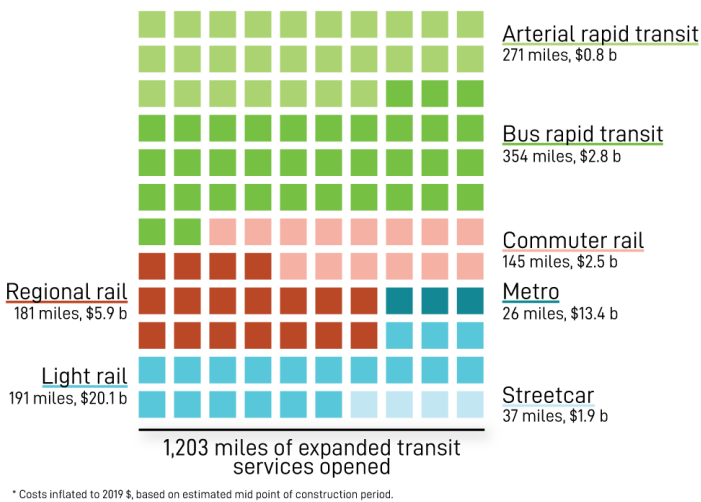
- » **United Kingdom**

In 2016, the Central London Employment Tribunal ruled in Aslam vs Uber BV that drivers are workers, not self-employed individuals and thus are entitled to minimum wage, paid holidays, and other entitlements [Quartz].

# The Problem

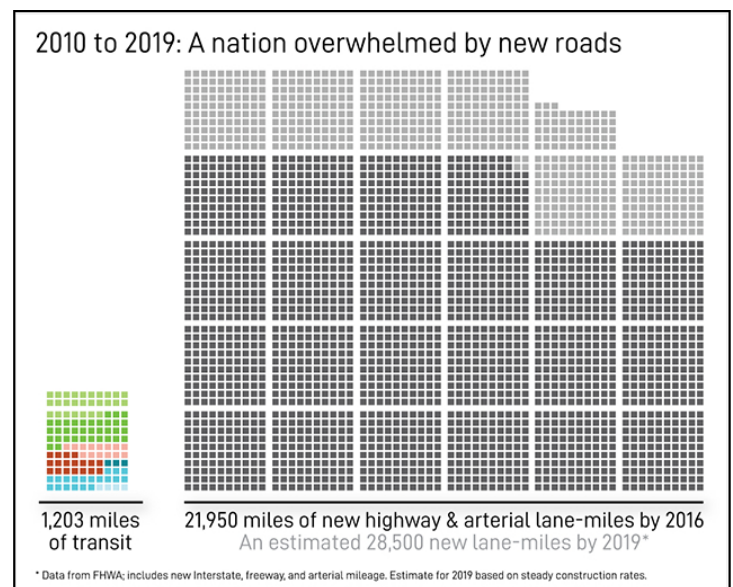
Although the public transportation system is facing many challenges, there are emerging and innovative opportunities to improve safety, operations, and customer service. U.S. cities added more than 1,200 miles of transit service between 2010 and 2019 costing more than \$47 billion [The Transit Politic, 2020]. Figure 3 shows the mileage added for transit infrastructure distinguished by the type of transit mode. But these investments have not been enough to fill coverage needs and curb declining transit ridership. As an overall U.S. trend, public transit ridership has declined by 7% in the last decade (excluding New York City). The U.S. has fallen far behind other first-world countries including Europe, Japan, and China, regarding ridership and investments in transit infrastructure. For example, over the last decade, the U.S. added less than 2 miles of bus improvements per million inhabitants compared to 10 in France [The Transit Politic, 2020]. Statistics however also show ridership increasing in some cities like Seattle and Austin, displaying potential for future growth [TransitCenter]. This could be indicative of the influence of TNCs and other first and last-mile services. For example, the Sacramento Regional Transit District has seen increases in ridership attributed to their implementation of docked bike-share as a way to access transit stations.

Fig. 3: Mileage Added to Public Transit Networks (United States, 2010-2019)



Resource: The Transit Politic

Fig. 4: Mileage Added to Highway and Arterial Roads



Resource: The Transit Politic

Challenges facing public transit systems are primarily caused by spatial structures. The auto-centric, low-density development that dominated the second half of the 20th century has created urban environments that sometimes lack sufficient population density to support serious investments in mass transit. This prioritization of the automobile continues today. Figure 4 shows the number of new highway and arterial lanes added in the U.S. compared to miles of transit infrastructure in Figure 3. The popularity of Euclidean zoning during the same time period has also led to less mixed-use development in favor of separated use, making it difficult to achieve the density and time-spread needed to support continuous, fixed-route service. This spatial landscape means that transit riders must travel longer distances to reach transit hubs. It requires significant use of an additional mode for the first/last mile of a trip and increases travel time. Unfortunately, street design has prioritized vehicles often resulting in a lack of facilities for pedestrians and cyclists as well as creating urban environments that are unwelcoming for people accessing transit. This spatial design creates inconvenience and results in many would-be transit riders opting for a personal vehicle. Studies show that on average people are willing to walk ½ mile to reach transit services, but this distance decreases when environments are not inviting or are very car-centric. On a network level, many transit systems

# The Problem

are not well integrated with alternative mode infrastructure (e.g. other transit services or micro-mobility). These development practices have caused transit in the United States to become impractical and stigmatized as outdated or as a low-income service. In addition, many transit agencies struggle with jurisdictional boundaries that have a significantly negative impact on service integration across jurisdictional lines and create transportation equity concerns. However, as the population continues to grow and generational trends show people rapidly moving back into cities, mass transit will prove essential for the functionality of city transportation systems.

Spatial challenges that create obstacles to efficient and reliable provision of public transit can be addressed through partnerships with TNCs which offer first- and last-mile solutions. However, as popularity of transportation network companies rises, transit agencies are becoming concerned over the competition with TNCs for ridership. One study from the University of Kentucky found that when Uber and Lyft started operating in a city, on average, rail ridership decreased by 1.29 percent per year and bus ridership decreased by 1.7 percent [StreetsblogUSA, 2019]. As people become more comfortable with shared mobility services, they might begin to choose these options more frequently, stealing ridership from the busiest transit lines. Agencies will experience revenue shortfalls and difficulties justifying funding. In addition to the loss in revenue from ridership, TNCs have the potential to decrease other PTA revenues such as transit station parking fees. Newer, relatively low-cost TNC services such as Lyft Line and UberPool heighten competition. Research shows that travelers use ridesharing and transit in different ways and if proper collaboration occurs these modes can complement one another.

Regarding urban functionality, there is still some question of whether TNCs contribute to congestion. Although they lessen the need for personalized vehicles, utilization rates being relatively low means that these cars spend more time on the road cruising for passengers (known as “deadheading”). In addition, TNC operations strategies, such as “surge pricing”, often encourage drivers to work more during peak hours when negative traffic and environmental conditions are heightened.

Another concern raised in this realm is that of the profitability of TNC companies. Both Uber and Lyft went public in 2019. Uber shares dropped 11% immediately following the initial public offering which resulted in the largest initial loss in U.S. history. These companies are now accountable to analysts and the investment community which leaves little room for monetary loss. In 2019, both Uber and Lyft saw fresh lows in valuation and were struggling to meet costs - Uber saw a drop from \$76 billion to \$49 billion and Lyft was \$3.4 billion from \$15 billion. This will likely result in TNCs raising rates to maintain profitability.

As discussed earlier in this report, regulation of TNCs and TNC partnerships is a cause for confusion and debate since TNCs are not traditional transportation service companies and therefore fall into a regulatory gray area. The rigorousness of the regulations and the level of government that has regulatory power also varies by state. There is no federal legislation governing the operation of TNCs, making it difficult to develop a standardized framework for PTA-TNC partnerships. Each local government must inventory themselves and learn from the best practices of successful partnerships around the nation.

# The Solution

Operating individually both transportation network companies and transit agencies are struggling to increase revenue and meet the needs of their ‘customers’. The arrival of TNCs to the transportation industry requires PTAs to rethink their future not just in terms of mobility management, but also the incorporation of new concepts and technologies such as shared mobility, autonomous vehicles, big data, and smartphone technology. Partnerships between TNCs can solve the inefficiency of transit agencies (caused by lack of spatial quality) while ensuring TNCs have a place in the urban fabric through subsidies and other significant government investments. As an integrated system, this will offer a viable alternative to the private car. Partnerships should aim to strategically fit these modes into the larger transportation ecosystem encouraging an equitable, safe, healthy, and environmentally sustainable system.

There is no federally standardized structure for these agreements. In spite of this, more than two dozen transit agencies throughout the U.S. have already implemented successful TNC partnerships. These transit agencies and their partnerships come in many shapes and sizes, several of which were initiated through the Federal Transit Administration’s Mobility on Demand Sandbox Grant Program. What works in one city may not work in another. Exploring what has made these partnerships successful and taking inventory of the best practices is a crucial step in understanding what these partnerships could look like elsewhere.

## Public Transit Agency Motivation for Partnerships

Public transit agencies face many challenges and needs that can be filled through partnerships with TNCs. PTAs have a wide range of motivations for entering TNC partnerships, with most employing a combination of target markets and designs. These motivations vary by agency and project but maintain the overarching goal of increasing public transit ridership. PTA motivations most commonly fall into the following targeted programs:

- First- and last-mile (KCM, MARTA)
- Gap Service (RTA Pima County)
- Microtransit (Capital Metro)
- Paratransit (PSTA)
- Modernization (CTA)
- Parking congestion at stations (SEPTA, Summit)
- Promoting alternative modes of transportation (CTA)
- Budget Limitations (Altamonte Springs)

### • First and Last Mile

First-last mile connections are one of the primary motivations for transit agencies to partner with TNCs. They will help agencies connect customers, who live beyond a comfortable walking distance to a bus stop, access transit. Service programs can be set up to define eligible trips by a geofence, a specific geographic area coded into the technology platform.

### • Gap Service

Gap Service partnerships address the challenges of providing adequate and cost-effective transit in areas that are difficult to serve or areas with low population densities. Transit agencies sometimes reduce service frequency outside of central business districts and on nights and weekends. In gap service partnerships, TNCs provide service to customers in a designated zone. The transit agency subsidizes the trip fare to save on operating expenses by using TNC vehicles and drivers rather than a transit vehicle.

# The Solution

- **Microtransit**

Microtransit is an emerging service model providing demand-responsive or flexible-route trips in a defined service zone by matching customers to vehicles through real-time trip requests. Microtransit is not only intended to serve areas that are typically difficult for fixed-route transit to serve, such as low-density suburban developments but also to provide an improved quality of service for riders.

- **Paratransit**

Some transit agencies solicit partnerships with TNCs to provide alternatives to traditional paratransit for the elderly or disabled. This often reduces costs for paratransit services while providing on-demand service to passengers who typically have to reserve their ride a day or more in advance.

- **Modernization**

Public transit agencies are scrambling to keep up with the booming tech industry. Some agencies are using TNCs to upgrade the technology that riders use to schedule and pay for trips involving connections to other modes of transportation. This helps to strengthen the “brand image” of the agency.

- **Parking Congestion at Stations**

Busier transit hubs experience issues trying to provide enough parking to match demand. TNCs are a simple solution. The driver drops off their passenger at the station and instead of using a parking space, either immediately picks up another passenger leaving the station or leaves to find another passenger elsewhere. This frees up parking spaces around the station. For example, in Summit, New Jersey the city decided to pay Uber instead of building a new parking lot. The cost of a round trip to/from the station with Uber costs about the same as a daily parking fee. The city expects the deal to free up around 100 parking spots at the station.

- **Promoting Alternative Modes of Transportation**

Established TNC companies have started making investments in bicycle and scooter companies and integrating these modes into the smartphone app. Many cities have adopted policy goals to decrease carbon emissions and promote improvements in health. Encouraging transit passengers to use active modes of transportation (cycling, scooting, etc.) prevents travelers from using personal vehicles or other carbon-emitting options to access transit stations. In addition, many cities are looking for creative ways to increase accessibility and equity in low-income areas. Bicycling or riding a scooter provides a low-cost option for getting to and from stations.

- **Budget Limitations**

It is possible that smaller transit agencies could see substantial savings by partnering with a TNC. In Altamonte Springs, Florida, the city’s FlexBus program failed after the FTA withdrew essential transit funding. The city partnered with Uber to replace this service, freeing up dollars from rarely used bus lines and reallocating them to improve higher service routes. Programs like these still have their drawbacks. One is the requirement to have a base level of technological literacy and affordability; residents that hope to use the program need to have a smartphone and understand how to use the app. There are also issues of ADA accessibility to vehicles as well as congestion [The Verge].

# The Solution

- **Temporary Removal of Revenue Vehicles**

In May 2019, a train incident in Long Island disrupted the Long Island Railroad Montauk Line service on Labor Day Weekend, one of the busiest times of the year in the Hamptons. This temporarily removed trains from the line for days. After the incident, the agency coordinated with transit agencies and rideshare companies like Lyft and Uber to transport stranded travelers to their destinations. In addition to managing an efficient distribution of travel, agency coordination with companies can ensure a reduction in pricing so their travelers are not subject to the effects of surge pricing, which can increase trip costs significantly [Newsday].

- **Other Targeted Programs**

Special events (San Diego MTS), geographically restricted subsidies (Centennial Colorado), service interruptions (LIRR), labor disputes (SEPTA), off-hour service, marketing (Austin, Texas), Suburban solutions, Improvement of integration in the transportation system, stimulating economic development.

## Types of PTA-TNC Partnerships

There are three different types of PTA-TNC Partnerships: Type 1, Type 2, and Type 3:

- **Type 1 Partnerships**

These partnerships involve monetary investments by a PTA or the subsidization of rides with offers that are only available under specific conditions, such as certain geographic areas or the origin/destination of a trip ending at a transit agency station. These partnerships seem to get the most media attention, like those in Monrovia, Ca. or Altamonte Springs, FL.

- **Type 2 Partnerships**

These partnerships involve a collaborative effort between the PTA and TNC that yields some type of integration (digital platform or otherwise) and/or a custom discount code. This serves as an indirect approach for PTAs that are not comfortable with completely or partially subsidizing TNCs. Examples of this type of partnership are DART's mobile ticketing app, "GoPass" which allows passengers to purchase both public transit and Lyft rides, or TriMet's integration of the city's "RideTap" system that gives both public transit and Lyft transportation information

- **Type 3 Partnerships**

These partnerships involve both monetary investments/subsidization and integration of PTA and TNC digital systems.

## Takeaways from PTA-TNC Partnerships

- **Challenges of the Transportation System**

Agencies can avoid the prohibitive cost and unprofitability of providing fixed-route service in underserved or suburban areas in favor of more flexible shared mobility services. The ability of TNCs to provide first- and last-mile solutions and thus increase the catchment area of transit stations gives transit agencies the opportunity to focus resources on modernizing top-performing routes. It also allows investment in large mobility hubs to move and serve the largest amount of people. Partnering with TNCs provides successful trip chaining by relieving

# The Solution

pressure from transit agencies to provide a complete door-to-door service. This is a key component in the development of an integrated multi-modal transportation system. Currently, underserved markets where TNCs are closing the gap include late-night service for night-time shift workers and other late-night destinations. There are also opportunities to create target programs that could expand the focus to grocery shopping, hospital shifts, senior citizens and those with disabilities.

## • Benefits

Shared mobility has much to offer cities. Convenience, flexibility, quick service, and the ability to fill gaps between services and inadequately served markets are just a few. The benefits of a TNC partnership vary widely from a transit agency perspective but generally fall into six categories:

1. To solve practical challenges of the transportation system
2. To achieve policy goals
3. To demonstrate innovation
4. To provide a temporary solution during a special event and / or service disruptions
5. To leverage data
6. To cut costs

## • Policy Goals

As transportation equity becomes a reoccurring theme in vision and comprehensive plans, cities must look at innovative solutions to provide affordable and spatially accessible transportation to all residents. Allocating transit funds to TNC partnerships is a cheap and quickly implementable solution compared to providing fixed-route services like bus routes. Moreover, the cost of TNC services is often too expensive for low-income residents. Partnering with transit agencies to leverage transit funding makes these services accessible to all income levels.

## • Innovation

In the United States, transit is in danger of becoming a thing of the past. It is often stigmatized as outdated or as a service for low-income residents. Transit agencies recently are being tasked with devising innovative solutions to encourage the mainstream population to see transit as a viable option for getting around the city. Since TNCs have the unique ability to leverage technology, specifically smartphone applications, it appeals to the new generation. This form of the trendy application holds the power to bring transit into the 21st century. TNCs are a tool for transit agencies that make transit ridership more attractive to non-traditional riders and more feasible for those that do not need to use transit.

## • Temporary Solution

TNCs can be used to assist with the projected overflow of passengers during special events. Some cities have opted to provide one-time discounts to riders of TNCs to discourage people from using private vehicles that contributes to congestion. During both controlled and unexpected disruption in service, transit agencies traditionally dispatch bus fleets. This strategy is often characterized by increased travel times and peripheral costs to the passenger. TNCs can offer quick and convenient service on par with the permanent transit service. TNCs also offers real-time GPS tracking which helps avoid passenger dissatisfaction. Flexibility in response to changing circumstances has long been a challenge for static transit agencies. TNCs offer a creative solution to this challenge.



# The Future

Ultimately, the public wants to fuse transit, cars, bikes, and walking into one collaborated app. There are challenges to overcome, and the first step is to incrementally incorporate other modes of mobility that serve all users.

## Technology

In some places, transit agencies that are uncomfortable with completely or partially subsidizing TNCs have taken an indirect approach by creating their own apps that link and integrate TNCs with traditional transit services. Dallas Area Rapid Transit created an app called “GoPass” that allows you to buy a mobile transit ticket and subsequently directs you to the Lyft app. TriMet in Portland, Oregon is fully integrating Lyft into its “RideTap” app. This offers access to consolidated information from both Lyft and the transit agency in the same app. The cities of Los Angeles and Denver have also partnered with Xerox to develop innovative new applications that offer a wide array of travel options including both TNCs and public transit. These apps take the next step to personalize options based on traveler priorities for carbon emissions, walking speed and travel time.

## Where are we going?

### • Mobility as a Service

Mobility as a Service (MaaS) is “the integration of various forms of transportation services into a single mobility service accessible on demand [resource: MaaS Alliance].” MaaS has been a hot topic in transportation in the last few years and many people now believe that one integrated digital platform offering combinations of all modes of transportation is the way of the future. Uber, Lyft and more recently City Mapper are racing to become the shared mobility platform that dominates the transportation industry. Future platforms will include individual payment options as well as weekly or monthly subscriptions.

#### » Cubic and Moovit Partnership

In January 2020, Moovit partnered with Cubic to develop a MaaS system that combines Moovit’s multimodal trip planning service with Cubic’s payment and ticketing capabilities. The goal of this partnership is to create a seamless experience for users and increase the use of public transit services. When the new platform is launched, it will be made available to public transit agencies in Chicago, Los Angeles, Miami, New York City, San Francisco, and Washington DC, all of which are current Cubic customers [Pymnts].

#### » Quebec Taxelco and Netlift Partnership

Netlift is a smart transportation platform that combines carpooling, parking management, and taxi travel with the goal of creating faster, and cheaper trips. Taxelco is a taxi company based in Quebec and is the largest taxi company in Montreal and Quebec City. In January 2020, the two companies announced that they would be pooling resources, including algorithms for routing, dispatching, matching, and managing carpooling, and parking and smart payments [CTV News].

#### » Citymapper

One company that is moving towards the MaaS model is Citymapper. Traditional trip planners do not have mixed transportation mode options. Even Google Maps, one of the most popular and advanced trip planners, only offers walking as a first- and last-mile mode. Founded in 2011, CityMapper is a public transit and mapping application that boasts being the “ultimate transport app”. The app attempts to turn public transit into

# The Future

a utility by seamlessly integrating all modes of transportation into its travel planner. It uses several types of data including open data, data from local transit authorities, user-generated data and occasionally data from locally employed personnel. The SuperRouter provides real-time information such as train departure times and car availability thus placing knowledge of existing infrastructure in the hands of its users. Citymapper has been hugely successful in London. Headquartered there, it is viewed as the most successful of the city's trip planners even above the Online Journey Planner of Transport for London itself. Citymapper is the first of its kind in the world and gives a sneak peek into the future of the transportation industry. The Citymapper Pass, which was piloted in London this year, is the next step. This pass aims to simplify the process of navigating cities with complex, multimodal transportation systems through a contactless payment card run on weekly subscriptions. Similar payment systems already exist in places like the Netherlands, where travelers use a personalized public transit "chip card" to pay for the train, tram, metro, and the national bike-share system.

## • Air Taxi Ridesharing

In 2016, Uber released a white paper outlining the market case, need, and feasibility study for aerial ridesharing, with passengers being transported by electric vertical take-off and landing vehicles (eVTOLs). This service is meant to facilitate faster commutes from suburbs to urban areas while reducing surface congestion. The company plans to launch pilot projects in Dallas, Los Angeles, and Melbourne in 2020, with commercial flights to be available in 2023. Other competitors have emerged around the globe, specifically Ehang in China and Lilium in Germany.

There is still a myriad of barriers to aerial ridesharing, which Uber itself outlined in its aforementioned white paper:

1. Compliance with regulations set by the United States Federal Aviation Administration (FAA) and European Aviation Safety Agent (EASA), which regulate 80% of air traffic combined;
2. Vehicle range, efficiency, cost, and reliability of untested eVTOL technology;
3. Environmental issues such as noise and emissions;
4. Lack of "Vertiport / Vertistop" infrastructure in cities (areas where customers can board and depart flights); and,
5. Issues with training and keeping up with the demand for licensed pilots.

## • Autonomous Rideshare Vehicles

Rideshare services like Uber and Lyft have made autonomous vehicles the eventual goal that will lead them to long-term profitability. In an article from Loup Ventures assessing the future of Lyft, the company anticipates that rather than coming out with a fully autonomous vehicle, autonomous operations will be slowly phased in. Incremental rollouts including fixed routes or controlled areas like campuses and other small, geo-fenced regions. This will lead up to the eventual rollout of a fleet of Level 5 AVs, which are fully autonomous vehicles expected to perform in a fully equivalent manner to a human driver.

# Best Practices

## Regulation and Oversight

Transportation Network Companies can have a habit of pitting local and state governments against each other when it comes to regulation of their activities. In the University Transportation Research Center Report Post-TNC Transportation Policy and Planning: Who and What Should be Regulated and How To (2016), there is a breakdown in which policies are best controlled by the state, and which are best controlled by local jurisdictions.

### • State Regulations

For states, the report's preferred minimum requirements could be:

1. Uniform insurance coverage available at all times
2. Biometric (fingerprint-based) background checks for all drivers
3. Reasonable and affordable licensing fees that cover the cost of issuing licenses
4. Driving record licensing restrictions
5. Uniform rules of conduct for driving and TNC driver misbehavior

### • Local / Regional Regulations

Even though states control licensing decisions, enforcement of policies could reside at the local and regional law enforcement. The report also identifies which best practices should be left up to local jurisdictions:

1. Jurisdictions should be allowed to set taxicab fares (providing consumer uniformity and transparent expectations)
2. Regulation for consistency and transparency, when necessary, for for-hire vehicles or pre-arranged fares
3. Set limitations on the number of TNCs that can be given a permit for entry
4. Assess supply and demand expectations

The report reasons that these measures are more efficiently controlled under local law policy due to the complexity of unique cities and suburbs, as well as issues such as transit access and fare affordability.

The University Transportation Research Center also created another report titled One Standard for All: Safety, Effectiveness, and Best Practices for Taxi, For-Hire, and TNC Driver Criminal Background Checks (2015). This report aimed to identify best practices when it came to hiring and licensing drivers. To ensure passenger safety, the government could have a role in licensing drivers. First, there could be one standard that applies to all drivers (taxi, limo, or TNC) when making licensing decision. The licensing government could also be responsible for fingerprinting; biometric, electronic fingerprinting is preferred. They could ensure that there are specific criminal convictions that can bar licensure, especially violent crimes. The government could also ensure that drivers are following anti-discrimination laws. Drivers could have the opportunity to be heard and present evidence as part of their licensing procedure. A “rap-back” service (a service that sends notices to employers when employees are arrested for a crime) is preferred to monitor driver conduct.

# Best Practices

## Performance Measures, Annual Reporting, and Data

Presently, only 11 of the 50 largest transit agencies have taken the partnership plunge. If more choose to engage in TNC partnerships, any subsidies for riders provided will likely have multiple “strings attached,” due to a poorly designed program which could increase deficits of transit agencies and worsen roadway congestion. Unfortunately, a lack of performance analysis creates the risk that mistakes will be made. TNCs will no doubt remain reluctant to share confidential data about where trips start and end – and unwilling to tinker with dynamic pricing techniques. Collection and sharing of data have become important components of the shared mobility conversation. Digital platforms allow TNCs to collect an immense amount of data that has previously never been available. There is enormous potential for the use of this data in city planning and policy. However, coming to data-sharing agreements has proven to be challenging and early partnerships often lacked them. TNCs have been reluctant to share this data due to nationally debated privacy concerns that have recently plagued other high growth startups like Facebook. In Florida, the “Sunshine laws” require certain government information to be publicly available. This often affects the data TNCs are willing to share.

Suggested performance measures should reflect the practices that governments regulate, including licensing, trip information, safety and discrimination, and fare information:

### » Licensing

- Number of license applications
- Number of license applications approved or rejected
- Number of licenses revoked
- Reasoning for license revocation (lack of insurance, discrimination, criminal behavior, etc.)

### » Trip Information

- Number of trips
- Length of trips (total miles and average length)
- Length of time for trips (total hours and average time)
- Anonymized trip origin and destination data (can also be used to measure discrimination of certain neighborhoods)

### » Safety and Discrimination

- Number and severity of crashes involving rideshare vehicles with passengers
- Breakdown of crimes during a ride, differentiating between those committed by passengers and those committed by drivers
- Number of discrimination cases reported

### » Fares

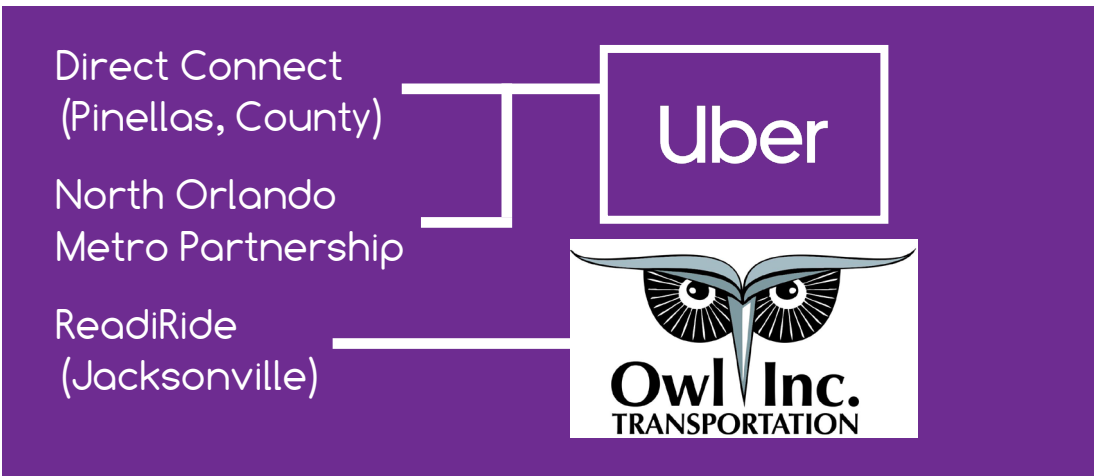
- Statistical distribution of fares, including average and standard deviation.

This data should be collected and assessed by local jurisdictions and made available to regional planning organizations and states. Other measures should be instituted if there are partnerships in place, depending on the type of partnership that is being used. For example, if a first / last-mile program is in place, trips to and from transit stations should be measured. If a subsidy program is in place, tracking the number of rides and fare price

# Best Practices

information is important to make sure the TNC is conforming with the policy in addition to calculating how many people are using the program.

Additional federal rule making and guidance on required performance measures for PTA and TNCS partnerships, will help agencies like FDOT to provide technical assistance. There is a convergence of data that needs to occur between PTA and TNCs.



FDOT will define key performance indicators and develop an evaluation plan for TNC partnerships (for data collection before, during, and after a partnership is implemented). It is worth introducing policy and legislative language as Massachusetts has for third-party evaluators.

1. FDOT may want to structure a process for compliance to the data sharing agreements early and be prepared to renegotiate with all parties concerned if terms cannot be met.
2. Evaluate progress toward Key Performance Indicators on a monthly basis; summarize outcomes annually (or before for shorter pilots).
3. Refine indicators based on ongoing monthly monitoring.
4. Provide a template Report to compel communication and evaluation of progress and outcomes with all involved stakeholders.
5. A feedback loop is needed.
6. FDOT may consider stressing the importance of advocating for the following performance measures to ensure equity in transportation options for people with disabilities instead of the trip number requirements. As seen in the New York City rule, while the new alternative addresses a performance-based approach in its required metrics, the proper baselines and points of comparison among all riders has yet to be formalized.
7. Create a FDOT TNC data sharing structure, and FDOT Transit Business Intelligence Platform.

Partnership Design	% of Case Studies
Transit Agency Subsidize TNC Trips	92 % (12 of 13)
Marketing Partnerships	8% (1 of 13)
Software Partnerships	30% (4 of 13)

# Best Practices

- **Cutting Costs**

Preliminary data from successful TNC partnerships around the U.S. shows that a properly designed partnership can be cost-effective compared to the cost of traditional services such as buying buses, paying for labor and fuel, and performing maintenance on vehicles and routes.

- **Can TNC partnerships be a short-term fix to long term transit planning?**

The most successful projects used their data and public feedback to create a second round of improvements to fully realize project benefits. If the data shows that the project is not working, do not give up- make adjustments! Because of the temporary nature of some projects, challenges can be addressed while the project is operational. Design tweaks are in the iterative nature of the Quick-Build process. They can ease the communication between potentially conflicting roadway users effectively. For example, conflicts with driveways, existing curbside zones, access points, intersection treatments, signal timing, and lane widths can be all addressed during project implementation.

# Best Practices

- **Metrics**

A clear calculation and definition of the metrics listed below is specifically for PTA-TNC partnerships.

Example Metrics:

<b>Metric</b>	<b>Unit of Measurement</b>
Average Trip Length	miles
Vehicle Revenue Miles	millions
Passenger Miles	millions
Vehicle Revenue Hours	millions
Average Occupancy	per passenger
Number of Unlinked Trips	millions
Average Fare (USD)	per unlinked trip
Assumed Average for Vehicle Revenue Capacity or Quantity of Seats per Vehicle	per passenger
Total Expenses (USD) includes Capital and Operating Costs	millions
Fare Revenue (USD)	millions
Subsidization (USD)	millions
Average Subsidy (USD)	per passenger
Average Vehicle Revenue Speed	miles per hour (MPH)
Assumed Average for Vehicle Revenue Capacity or the Quantity of Seats per Vehicle (Total = Seating + Standees)	passengers
Efficiency (assumed capacity)	percentage

Example Calculations for Metrics:

<b>TNC Metrics</b>	<b>Unit of Measurement</b>
TNC: Average Trip Length	miles
TNC: Average Vehicle Speed	miles per hour (MPH)
TNC: Fare	per passenger
TNC: Average Trip Duration	minutes

Metrics for PTA and TNC partnership trips for Accessibility and Paratransit:

- Dispatching base license number
- Date and time of request receipt
- Manner of request receipt (app, phone, etc.)
- Completed trip (yes or no)
- Report by zip codes
- Problem drivers
- Logged hours by driver
- Driver completing training course

# Best Practices

Metrics for all other PTA and TNC partnership trips:

- First / last mile – critical as these are most popular for both the ADA and regular trips
- Vehicle, base, and driver numbers
- Pick up and drop off locations
- Date and time of pick up and arrival
- Total passenger wait time
- Ridership levels
- Geographic areas
- Peak demand
- Off hours
- Increased mobility
- Lower cost per mile
- Cost per trip
- Monthly ridership
- Origin and destination
- Cost savings
- Total boarding
- Vehicle revenue miles
- Vehicle revenue hours
- Passenger miles
- Asset Inventory
- Revenue Sources
- FTA shared ride service, subsidized TNC trips
- Fare payment Title VI



# TNC- PTA Contracts

## Introduction:

Public transit agencies (PTAs) have a social obligation to ideally provide affordable transportation service to as many people and destinations as they can. Transportation network companies' (TNCs) missions are more about providing experiences to consumers. They can work together to provide more affordable service to a wider residential population. However, public-private partnerships are a delicate balance and their success depends on a strong contract.

## Evaluated Contracts:

In total, 54 partnership contracts were reviewed, 13 of which have been included as case studies in Transportation Network Companies and Public Transit Agency Partnerships. Of those 13 case studies, FDOT successfully received 6 agencies contracts.

Type 1 (monetary investments by a PTA with offers that are only available under specific conditions, such as geographic areas or the origin and destination points of a trip)

Denton, TX  
Pinellas County, FL  
San Diego, CA

Type 2 (some type of integration between a PTA and TNC within a digital platform that sometimes offer discount roads)

Arlington, TX

Type 3 (involves both investments / subsidization and integration)

Summit, NJ  
Jacksonville, FL

A total of 28 contracts were reviewed for this report and the following discussion is the assessment.

## Contract Assessment:

The contracts of three TNCs, : Via, Lyft, and Uber were reviewed. Via provides the most detailed description and list of data to the client. Lyft offers a consistent template of standard data. There is no data available from Uber's contract, since they state that most of the data is trade secret. To address the issue of trade secrets Massachusetts and the state of California statutes and processes were reviewed. Massachusetts does not classify TNC data on a dashboard as trade secrets. It therefore considers the data public information.

### Massachusetts TNC Division – Data Requirements

One of the most contentious points of a contract is the sharing of data-which can be referred to as proprietary or trade secrets. The Commonwealth of Massachusetts addressed this in a TNC enabling statute, which required a \$0.20 per-ride assessment on all TNC rides that originate within the Commonwealth. The sum of assessments is distributed, with half going to the Commonwealth's transportation and development finance agencies. The

# TNC- PTA Contracts

other half is split between Massachusetts cities and towns based on the amount of trip originations within their jurisdictions. This assessment is enforced by the TNC Division of the Department of Public Utilities, which is funded by surcharges on each transportation network company. Each TNC must annually report their intrastate operating revenues for the previous calendar year at the end of March. The operating surcharge is apportioned in accordance with each TNC's operating revenue. If a company fails to provide the information by the deadline, the division estimates their revenue and assesses a surcharge based on that amount.

The commonwealth has four permitted TNCs: Embarque Boston, Lyft, River North Transit, and Rasier (currently doing business under the Uber App). Each TNC must pay the surcharge within 30 days of notice from the TNC Division, or risk suspension or revocation of their permit to operate within the Commonwealth. To note is the absence of Uber.

## Setting up a Legal Framework for FDOT TNC Data Reporting

A suggested course for FDOT when providing comprehensive transit TNC partnership technical assistance is legal interpretation. Set by either the State of Florida or FDOT, and based on the argument that transit agencies using state funds to create ridership (including through partnership with a TNC) cannot classify ridership data as a trade secret. Other states have addressed this through legislation. California requires the date, time, and zip codes of origin and destination of a ride that was accepted or declined. Below is a sample of data collection requirements as stated by the Massachusetts TNC Division:

*Annually, a TNC shall report to the Division the following:*

*(a) By February 1st of each calendar year, a TNC shall submit a report for the number of Rides from the previous calendar year, including:*

- 1. City or town where each ride originated;*
- 2. City or towns where each ride ended;*
- 3. Aggregated and anonymized trip route and length (miles and minutes); and*
- 4. Location of Vehicle accidents.*

*(b) By March 31st of each calendar year, a TNC shall report its intrastate operating revenues for the previous calendar year. If a TNC fails to report its intrastate operating revenues to the Division by March 31st of any calendar year, the Division may estimate a TNC's intrastate operating revenues. A TNC's intrastate operating revenue shall include but not be limited to any Rider picked up at the following:*

- 1. Airport;*
- 2. Train Station;*
- 3. Bus Terminal; or*
- 4. Any other kind of port.*

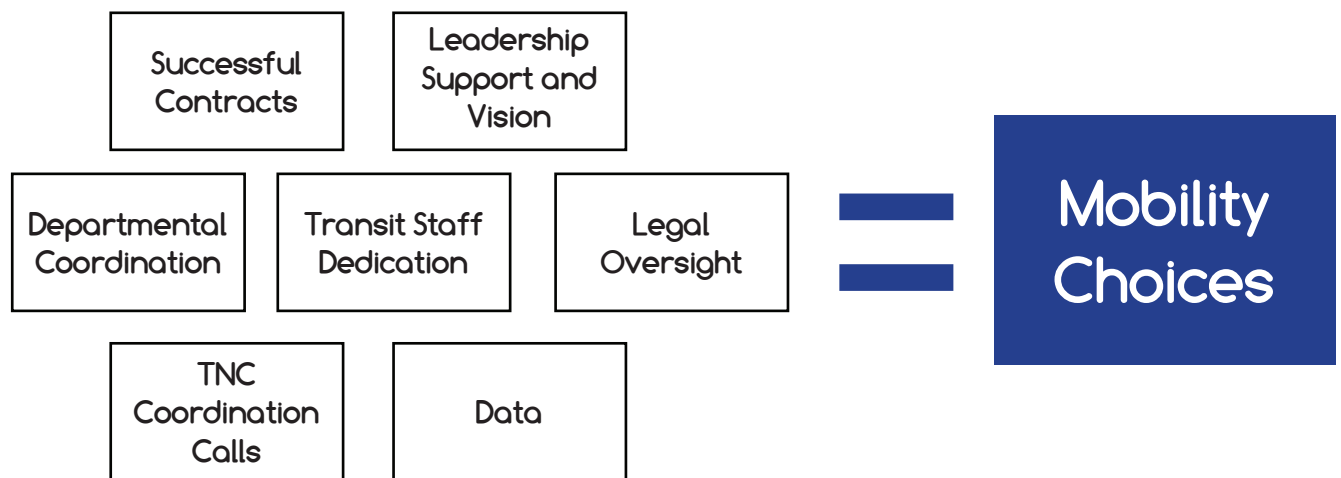
# TNC-PTA Contracts

## Pinellas County Suncoast Authority Partnership

Pinellas County Suncoast Authority was chosen because the contract is explicit in its request for data, has a long-term vision, and an understandable grant application.

The data requirements have mostly been met by Uber, however that data is for internal PSTA operations only. If the data is presented, it will be presented in aggregate form with other services. They have also been very forthcoming in providing data to the TNC, even for datasets that are not within the contract agreement. As of now, there is no external cost to acquire data. Internally, data aggregation takes a few hours, depending on metrics and time.

The PSTA Model works for a various reasons. One is that many of the staff and leadership are bus riders. The Authority also has highly efficient interdepartmental coordination and a strong legal team.



## COVID-19 and the Role of TNCs and Transit:

During the initial stage of the COVID-19 pandemic, Amtrak and SunRail had committed to increasing the frequency of cleaning services in trains and stations. They increased the amount of available cleaning supplies, and consistently updated employees on best practices to reduce spread. Many bus services still offer normal schedules and routes but have taken additional measures. These include increased cleaning, availability of hand sanitizers, and rear door boarding.

Rideshare services like Uber and Lyft took steps to keep both drivers and riders safe. Drivers were supplied with disinfectants or sanitizers to make sure their cars were kept clean. Lyft had suspended all shared rides in an effort to slow the spread of COVID-19. In addition, it was left up to the driver's discretion whether to assist in handling a rider's luggage. The companies have also been working on plans to assist drivers with medical and financial assistance. These actions in unison by the Public Transit agencies and the TNCs proves yet again that partnerships to provide the public commuting options is possible even during a pandemic. The fact that a private agency followed suit after Public agencies set the standards of what must occur, certainly highlights the possible complementary nature of these two entities.

# TNC- PTA Contracts

## Next Steps:

The next scope in completing the implementation is to:

1. Create a toolbox of all programs in Type 1, 2, and 3,
2. Create an aftermath assessment of the impact of COVID-19,
3. Creation and definition of performance measures, need to develop formulas that clearly align with FDOT measures and funding,
4. Create report cards and metrics, and
5. Devise webinars with major national agencies and forums showcasing FDOT research and lesson learned.

# Lessons Learned

The FDOT Secretary has focused the agency on implementing several initiatives centered on improving safety, enhancing mobility, and inspiring innovation. Partnerships between TNCs and PTAs are one of the most effective methods of innovating the public transportation landscape. As mentioned previously, these partnerships have historically had an adversarial relationship, with both vying to attain the most riders. The relationship has however evolved over the past few years, with both parties seeing the benefit in creating partnerships - seeing mutual benefit to cities' residents and higher revenues for both companies and agencies.

Both California and Massachusetts house their TNC regulations under their relevant departments of public utilities. Massachusetts' TNC division is based in the Department of Public Utilities; their responsibility is to oversee the operations of rideshare companies within the commonwealth. This Commonwealth saw a rapid increase in TNC activity, with 81.3 million rides in 2018, a 25% increase from the previous year. Massachusetts also requires TNCs to share data on their ride activity and that they pay an assessment of 20 cents per ride. This is distributed to local jurisdictions, the Massachusetts general transportation fund, and the taxi industry. The increased ridership in 2018 generated \$16 million in revenues for the Commonwealth. California created requirements that TNCs obtain licensing, file reports with the Public Utilities Commission, follow insurance requirements, pay required fees for operation, and evaluate the DMV records of TNC drivers.

The most important caveat to these partnerships is the inability to assess their success or failure due to the lack of data, performance measures, or metrics. This can be addressed in the contracting process between the agencies and the companies. Contract language cannot be universal and so sample language tied to the motivation of the partnership is critical. Based on the language of the contract an assessment on safety can be made. After this safety assessment, the data can be housed as business intelligence at the FDOT Central office.

## Timeline of a PTA - TNC Partnership



The reason for this document is the rapid increase in PTA-TNC partnerships. In 2016, there were 54 partnerships in the United States; today, there are almost 600. This has generated a multitude of case studies that can be assessed and learned from. Agencies can now see which ones have successfully benefited public transit and which ones are unsuccessfully adding congestion to already burdened infrastructure. The first step is to collect and organize the data outcomes from these partnerships. FDOT can assess the best practices for each partnership and pass this onto FDOT District Offices, who in turn forward the information to their local PTAs.

## Funneling of Partnership Data



# Appendix: Case Studies

This section contains summaries of all the case studies that were reviewed for this document and includes data such as geographic location, transit agency, TNC partner, and partnership type, as well as background information on the project. The partnership types are explained below.

**Type 1:** These partnerships involve monetary investments by a PTA or the subsidization of rides with offers that are only available under specific conditions, such as certain geographic areas or the origin/destination of a trip ending at a transit agency station. These partnerships seem to get the most media attention.

**Type 2:** These partnerships involve a collaborative effort between the PTA and TNC that yields some type of integration (digital platform or otherwise) and/or a custom discount code. This serves as an indirect approach for PTAs that are not comfortable with completely or partially subsidizing TNCs.

**Type 3:** These partnerships involve both monetary investments/subsidization and integration of PTA and TNC digital systems.

Geographic Area	Transit Agency
<b>Type 1</b>	
Centennial, CO	Denver Regional Transportation District
Denton County, TX	Denton County Transportation Authority
North Orlando Metro, FL	Multiple Jurisdictions
Pinellas County, FL	Pinellas Suncoast Transit Authority
San Diego, CA	San Diego Metropolitan Transportation System
San Francisco Metro, CA	Bay Area Rapid Transit
Seattle, WA	King County Metro
<b>Type 2</b>	
Arlington, TX	Dallas Area Rapid Transit
Charlotte, NC	Charlotte Area Transportation System
<b>Type 3</b>	
Jacksonville, FL	Jacksonville Transit Authority
Atlanta, GA	Metropolitan Atlanta Rapid Transit Authority
Austin, TX	Capitol Metro
Summit, NJ	City of Summit / New Jersey Transit

# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: Centennial, Colorado

Public Transit Agency: Denver Regional Transportation District

Transportation Network Company: Lyft

The pilot program, called Go Centennial, was a six-month pilot project in 2016 that connected commuters in Centennial, a suburb of Denver, to Denver RTD rail stations. Lyft was the TNC that partnered with RTD. The agreement offered a 100% subsidy to Lyft users within a 3.75 mile radius of the city's Dry Creek Light Rail station. According to an audit of the project, ridership at the station increased 11.6% [Govtech]. It was the first PTA-TNC partnership that offered a 100% subsidy for TNC trips.

# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: Denton County, TX

Public Transit Agency: Denton County Transportation Authority

Transportation Network Company: Lyft

The Denton County, Texas partnership with Lyft included three “zones” that each had their own purposes and benefits for riders: Highland Village, University of North Texas (UNT), and the Alliance commercial development area in Denton and Tarrant Counties.

The Highland Village program replaced a community demand response service, which has shown to be more cost-effective. It offers a \$10 discount for Lyft users within a specific zone and services travelers to Highland Village and Lewisville. The UNT program provides after-hours service for students within the program’s specific zone and includes campus buildings, dorms, off-campus housing, and off-site research facilities. The Alliance program (referred to as the ZIPZONE) provides fully subsidized rides to workers within the development from park and ride facilities and the North Texas Express Commuter Bus.

Some challenges that remain include problems with jurisdictional fragmentation, difficulties coordinating service with other TNCs in the area, integrations with public transit mobile applications, and data gathering and reporting from TNCs.



# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: North Orlando Metro Area

Public Transit Agency: Multiple Jurisdictions

Transportation Network Company: Uber

In 2016, an interlocal agreement between Altamonte Springs, Lake Mary, Longwood, Maitland, and Sanford was made with Uber. It provided a 20% discount to riders within their cities, and a 25% discount to riders going to a SunRail commuter train station. Phase Two of the project was launched in 2017, which allowed subsidized rides between the five cities, and cost these cities a total of \$63,770. Phase Two ended in July 2018 with Uber reporting that over 186,000 rides were generated during the ten month period; the cities paid \$330,000 in subsidies in this phase [bizjournals]. The cities are currently evaluating the results of the pilot program and how to move forward.

# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: Pinellas County, FL

Public Transit Agency: Pinellas County Suncoast Authority

Transportation Network Company: Uber

In February 2016, Pinellas County Suncoast Authority (PSTA) became the first transit agency in Florida to partner with a TNC. The Authority partnered with Uber to provide subsidized rides to PSTA bus stops at the cost of \$1 per rider; the authority paid \$5 to Uber for each ride. Riders could only use the discount if they were within a certain geographic area.

The success of the program has been mixed. DirectConnect has continued to date and usage has grown steadily while PSTA has saved funds by reducing underperforming service. However, issues with Uber have surfaced throughout the program's history. Uber has had problems reporting accurate data to the Authority and PSTA does not have the ability to perceive which stations riders are going to or from or whether they are using the service to get on transit at all. Nonetheless, PSTA has renewed their agreement with Uber until 2021 [Shared Use Mobility Center].

# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: San Diego, CA

Public Transit Agency: San Diego Metropolitan Transportation System

Transportation Network Company: Uber

## San Diego

San Diego Metropolitan Transportation System (MTS) announced a partnership with Uber in 2016 to increase access to MTS Trolley and Rapid services in time for the MLB All-Star Game and San Diego Comic-Con. The partnership offers a one-time discount of \$5 for UberPOOL riders that use it to get to or from MTS transit centers.

# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: San Francisco Metro, CA

Public Transit Agency: Bay Area Rapid Transit

Transportation Network Company: Uber and Lyft

Bay Area Rapid Transit's (BART) 2015 partnership with Uber and Lyft provided a 50% discount to rides within a certain boundary to and from their stations. It also integrated BART services into Uber's mobile application with a new 'Transit' option.

# Case Studies Inventory

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Partnership Type: Type 1

Geographic Location: Seattle, WA

Public Transit Agency: King County Metro

Transportation Network Company: Via

King County Metro's partnership with Via is one of North America's most successful TNC-PTA partnerships. Via provides rides to residents in Southeast Seattle and Tukwila, taking riders to five Sound Transit hubs where they can connect to the LINK light rail system. The partnership was funded with significant support from the City of Seattle, King County, and Sound Transit, as well as a \$113 million grant from the FTA for their Mobility on Demand Sandbox Demonstration.

# Case Studies Inventory

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Partnership Type: Type 2

Geographic Location: Arlington, TX

Public Transit Agency: Dallas Area Rapid Transit

Transportation Network Company: Via

In 2017, Arlington replaced its low-capacity fixed-route bus system, the Metro Arlington Xpress, with shared mobility microtransit service provided by Via. At that time, Arlington was the largest city in the U.S. without a mature public transit system. Although the city recognized a need for an alternative to private vehicles, residents had long shown a lack of support for public transit options with many measures having been voted down. Desperate for an innovative solution, the city launched Arlington On-Demand using Via's Mercedes Metris vans. A local digital platform was used to hail rides and the \$3 payment made for each ride within the specified zone could be arranged for on the app. Also included was an option to purchase ViaPass for \$15 a week for up to 4 trips per day. The service now operates from 6 am to 9 pm on weekdays and 9 am to 9 pm on weekends and has served 120,000 riders. The authority entered into a contract with Via for \$2.1 million.

# Case Studies Inventory

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Partnership Type: Type 2

Geographic Location: Charlotte, NC

Public Transit Agency: Charlotte Area Transportation System

Transportation Network Company: Lyft

## Charlotte

The Charlotte Area Transit System (CATS) has partnered with Lyft to provide first and last-mile service to and from three CATS stations: Parkwood Station, JW Clay / UNC Charlotte Station, and University City Boulevard Station. These trips are taken within a geo-fenced area. CATS provide a \$4.00 subsidy to users either by adding a code to the CATSPass mobile app or entering a station code in the Lyft app.

# Case Studies Inventory

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Partnership Type: Type 3

Geographic Location: Jacksonville, FL

Public Transit Agency: Jacksonville, Transit Authority

Transportation Network Company: Owl, Inc.

In 2018, the Jacksonville Transit Authority partnered with Owl, Inc. to provide transportation to customers in certain zones of the city. The service now provides subsidized rideshare trips to the Arlington, Beaches, Highlands, Mandarin, Northside, Southeast, Southside, Southwest, Oakleaf, Talleyrand, and Pritchard communities. Riders within an eligible zone need to be dropped off within the zone they were picked up to receive the reduced fare. Fares are purchased through the MyJTA App and cost \$2.00 per ride and reservations are made via a phone call to the Authority's reservation service. There is no information on ridership or other performance measures. Service areas however have expanded from five zones to eleven.



# Case Studies Inventory

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Partnership Type: Type 3

Geographic Location: Atlanta, GA

Public Transit Agency: Metropolitan Atlanta Rapid Transit Authority

Transportation Network Company: Uber and Lyft

MARTA was the first transit agency in the U.S. to establish a partnership with a TNC. Though there are no discounted fares for MARTA, the partnership does offer discounts for rides using Uber and Lyft ranging from 20% to 50% for trips that begin or end at rail stations. The discounts were intended to encourage transit use to major destinations, such as the Atlanta International Airport. The agency's "MARTA on the Go" app provides access to Uber's platform. The partnership has also generated awareness and publicity of its service and benefits.

# Case Studies Inventory

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Partnership Type: Type 3

Geographic Location: Austin, TX

Public Transit Agency: Capitol Metro

Transportation Network Company: Via

Capital Metro partnered with Via to replace the MetroBus 470 line, which serviced the city's Manor Area. Monitoring and data collection requirements include quantitative and qualitative measures of transit ridership, before and after ridership comparisons, passenger feedback survey, and mechanisms and agreements for collecting and sharing anonymous data. There have been issues obtaining data from Via. Both on-demand and fixed-route services are provided by Capital Metro making it easier to coordinate fixed stopping locations for TNCs, schedules, and discounted transfers.

# Case Studies Inventory

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Partnership Type: Type 3

Geographic Location: Summit, NJ

Public Transit Agency: City of Summit / New Jersey Transit

Transportation Network Company: Lyft

The City of Summit has a partnership with Lyft to reduce the need of parking for commuters at the New Jersey Transit Summit Station and increase accessibility of the downtown to its residents by free and discounted rides to participants. This one-year extension and expansion is built on the previous partnership between the city and Uber. Users can book rides up to seven days in advance. The goal of the partnership is to give residents more flexibility and reduce the demand for parking at the station.