

Future of Florida Series

The Impacts of Ride Hailing on the Urban Environment

Transportation Network Companies: The Disrupter of The Urban Landscape

The FDOT Forecasting & Trends Office is launching a series of articles to inform transportation planners, engineers and partners on emerging transportation trends that may guide planning initiatives and support project development in the efficient movement of people and goods.

Transportation Network Companies (TNCs) provide app-based on-demand ride services and continue to offer ever more efficient, convenient, adaptable, and affordable modes of mobility. The first provider, Uber, started operations in 2009. These on-demand ride services use app-based platforms to match supply and demand for one-way rides. These platforms have the potential to impact traditional public transit ridership and urban movement of people and goods.

Four major urban regions in Florida are generally polycentric - large urban areas featuring multiple economic centers and dispersed social vitality. These expanded urban landscapes generally require car ownership with several individual mobility options available. Existing transit systems don't fully provide efficient and convenient paths to employment, retail and social service centers needed by diverse populations.

TNCs are filling gaps in mobility needs of Florida's residents and visitors by adding more choice within Florida's large urban environments. Additionally, legacy transit services and infrastructure is rigid in its design and expensive to expand so these systems often struggle to evolve in step with the de-centralized TNC business models and the needs of Florida's residents and visitors.

Here are five things to consider when planning for TNCs in Florida's urban environment:

1. Transportation networks and services **are here to stay and growing**,
2. TNC platforms **will continue to evolve and expand**,
3. More transportation choice **will increase curb competition**,
4. TNCs can **fill gaps in first mile/last mile connectivity** and is redefining transit, and
5. **Governance/statewide regulation** better serves all residents and visitors.

1

Here to Stay and Growing

The overall appeal of ride-hail transportation services is that Florida's residents and visitors know they have access to a reliable, convenient, accessible and affordable ride wherever they may be headed. With the speed and ease of ride-hail services, TNCs have created new markets, new business models, and growth opportunities for this transportation niche and the economy. These services are likely here to stay and grow in the coming years.

TNCs consider their ridership and trip data a "trade secret," which shields it from Florida's public records laws, even with several Florida cities and transit agencies partnering and subsidizing some Uber fares.¹

These on-demand ride-hail services operate primarily in urban areas. Of the two largest TNCs, Lyft operates in almost 300 U.S. cities and Uber is currently operating in approximately 209 U.S. cities. Lyft's larger geographic coverage in the U.S. reflects a difference in strategy between the two companies. Uber's strategy is to expand internationally; they are currently available in 600 cities in 82 countries. Lyft has partnerships with international ride-sourcing services but still has no presence of its own outside the United States (The Economist, 2018). Lyft is available in some small cities and suburbs in the U.S. not covered by Uber.²

In Miami, 57 percent of Uber drivers drive fewer than 20 hours per week, and 8 out of 10 drivers have earnings from other sources. In 2016, Lyft reported 3,362 vehicles using its app-based hailing system in Miami-Dade County. Uber reported a fleet of 9,478 vehicles for that same year.³

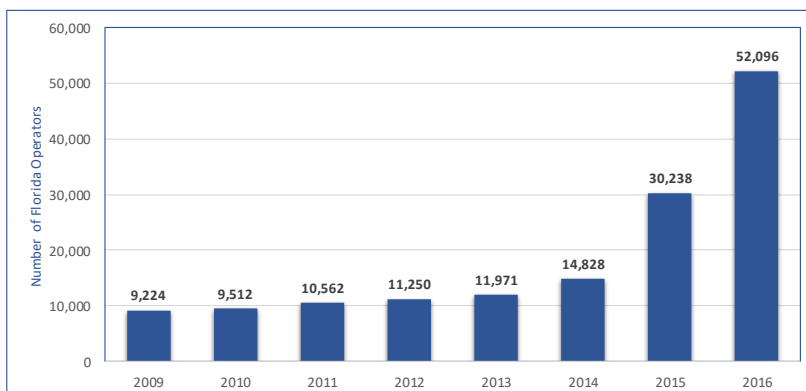


Figure 1.1: Number of Non-Employer Livery Operators in Florida

Source: CUTR – [Census, Statistics 2016](#)

The Center For Urban Transportation Research (CUTR) has used one source of data that suggests the number of TNC drivers in Florida. The Census reports the number of non-employer businesses and their income annually, by state and county. The job category that covers TNC operators and independent taxi operators is a reasonable surrogate source of

information on the magnitude of independent livery operations.⁴ Figure 1.1 shows the fast growth in number of Florida TNC operators in Florida since 2009.

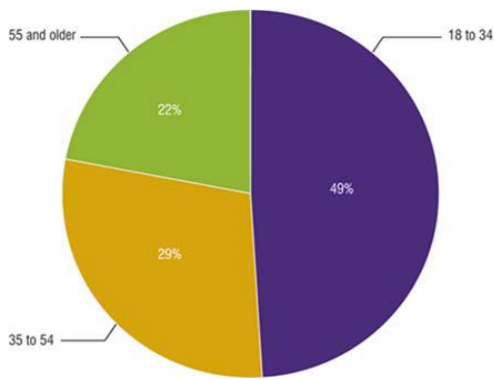


Figure 1.2: On-Demand Consumers by Age
Source: Colby and Bell, 2016

Figure 1.2 shows TNC consumers nationally, by age group. Ridership is highly concentrated in large, densely-populated metro areas. Riders are relatively young and mostly affluent and well-educated. Some 70 percent of Uber and Lyft trips are in nine large densely-populated metropolitan areas (Boston, Chicago, Los Angeles, Miami, New York, Philadelphia, San Francisco, Seattle and Washington D.C.). People with a bachelor’s degree, over \$50,000 in household income, and aged 18 to 34 years use TNCs at least twice or even three times as often as less affluent, less educated and older persons.⁵

As stated earlier, TNC usage skews toward more affluent residents that use ride-hail services as a **choice**. It’s an option to bypass buses and trains for those who can afford it. Meanwhile, less affluent residents that transit has **captured** are left with no viable alternative, as Uber and Lyft replace many under-utilized bus routes, increase the gaps in route access, and shrink the geographic availability of transit access. In smaller cities and more rural areas, where transit options are scarcer, poor residents do get relatively more use out of TNCs. But these are not the places where most Uber and Lyft trips are happening.⁶

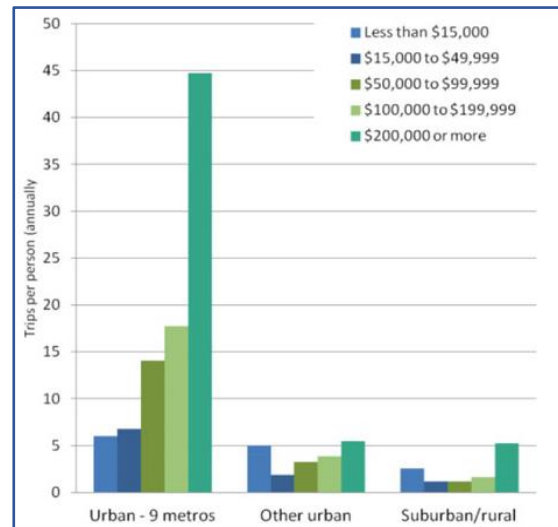


Figure 1.3: TNC Trips by Household Income
Source: Schaller, 2018

According to the Miami Herald, 14.5 percent of Uber trips in Florida are taken by visitors, with 27.3 percent of those visitors reporting spending more during their trips because Uber allowed them to visit more locations.⁷

Of the nationwide Uber users, 25 percent use Uber for their commute, 10 percent use it for business, 40 percent for leisure and 25 percent for personal use. This is important in that it legitimizes Uber as a transportation platform. In the 2018 Lyft Economic Impact Report, a survey was conducted asking their customer’s ride preferences and experiences. Results from four of Florida’s urban regions are represented in Table 1.1.

Table 1.1: Lyft Customer Preferences Survey Results

Customer Preferences	Miami	Tampa	Orlando	Jacksonville
Use their car less	60%	54%	40%	57%
Say owning a personal vehicle is less important	31%	26%	20%	22%
Use Lyft to connect with public transit	19%	10%	13%	13%
Use Lyft to get around when public transit does not operate	26%	21%	25%	22%
Used Lyft to get to the airport	45%	41%	38%	23%

Source: 2018 Lyft Economic Impact Report. <https://take.lyft.com/economic-impact/>

2 Platforms are Expanding

App-driven transportation services have been emerging as a platform of local and regional transportation services over the last several years. This new concept in de-centralized transportation services is now expanding beyond moving people; there are now new platforms that accommodate on-demand freight, food delivery, restaurant delivery, rental cars, bicycles, scooters and van pooling. Many transportation services are now utilizing this new payment and hailing method.

The net effect of these emerging services is generating more traffic in a scenario that did not exist just a few years ago. In Florida, TNCs aren't just supplanting taxis, they have more than tripled total for-hire vehicle mileage in a short period.⁸ While TNCs add convenience and choice for people to get around without relying on a personal car, the overall effect of their growth may be a factor in the increase in motor vehicle traffic and vehicle miles traveled (VMT) in Florida's dense urban areas.

Most of this mileage is concentrated in the Florida's largest cities, where TNCs compete with transit more than personal cars. Since 2014, the percent VMT growth in Florida's urban areas has been outpaced by the VMT growth in rural parts of the state (see Figure 2.1). Until there are more studies and data available we can only speculate what impacts the recent growth in TNC usage is having on the urban centers.

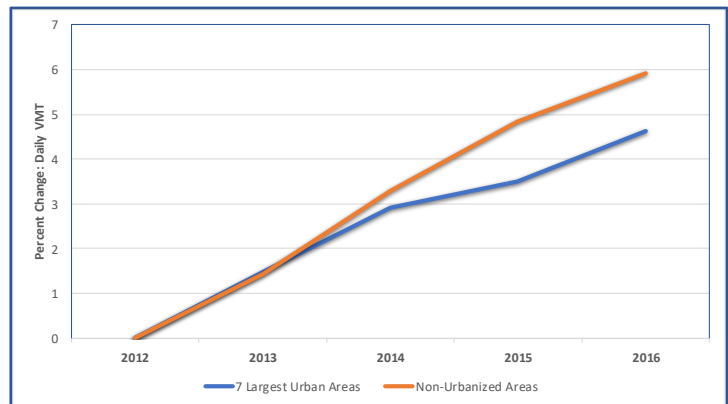


Figure 2.1: Florida VMT Trends on State Highway System

Source: [FDOT Source Book, 2017](#)

There are several ways TNCs are piloted, developed and established to expand their platforms. TNCs are developing their own line of services within the company, they are creating partnerships with other companies and agencies and they are acquiring other companies outright. For example, Uber is keen to expand modal choice by adding bicycle, scooter and transit options within their app platform.⁹ Additionally, taxi companies and transit agencies are developing their own app-driven payment and hailing capabilities to better serve their customers by providing the ease and convenience of these new platforms. Whether it's a TNC or transit agency, a one-stop app could give an app-provider control over ridership and trip data to gain an advantage in delivering *Mobility as a Service*.

Here are some examples of different types of platforms in Florida:

- [Demand Responsive Transit \(DRT\)](#) - This technology-enabled transit service offers flexible routing and/or flexible scheduling of [minibus](#) vehicles (Via, Chariot),
- [Jump](#) – Uber recently purchased this company where bicycles are rented and returned without the constraints of a docking station operating in several urban regions nationally,
- [Lyft Line](#) or [UberPOOL](#)– Generally a cheaper on-demand ridesharing or carpooling service that connects passengers with the same route or location,
- [Zipcar](#) - Hourly car rental without rental offices (currently operating in 19 Florida cities),
- [Uber Freight](#) - A free app that matches carriers with shippers,
- Micro-transit – a supplement to public transit providing shuttle service (i.e. Gainesville Autobus, Babcock Ranch, Jacksonville [Ultimate Urban Circular](#)), and
- [Uber Eats](#), [Bite Squad](#) – App-driven on-demand food and restaurant delivery service.

With the emergence of many new transportation services, there will be a shift in the way people use and access Florida’s transportation infrastructure. All these platforms impact how people move in urban settings and how we access goods and services. Figure 2.2 shows the rapid growth in TNC operators, by county.

A key question for urban transportation planners is, “How will the urban landscape need to adapt to accommodate the shift in the way people move within the urban environment?” Are there innovative ways to utilize, augment or re-purpose existing right of way (ROW)? Some considerations are:

- Evolving street parking needs,
- Adding drop-off zones/spaces,
- Re-purposing some rental car lots (such as aviation), and
- Increasing the number of ride-hail and carpool lots.

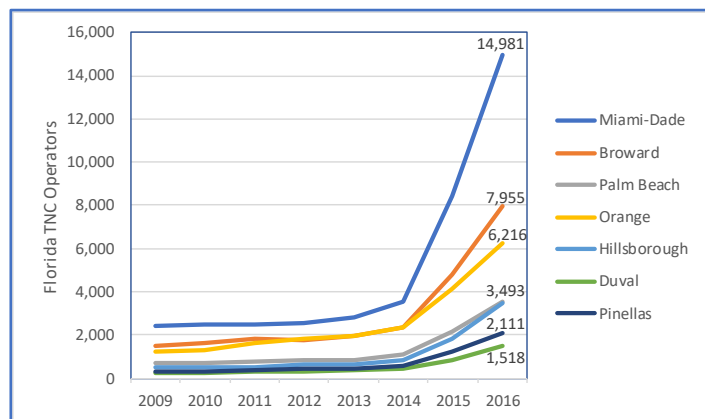


Figure 2.2: Non-Employer Livery Operators, by County
Source: [Census Statistics, 2016](#)

With competition for the curb increasing, how do transportation planners accommodate for different parking needs? There may or may not be more motor vehicles in urban areas but parking needs are changing with the new mobility services.

Parking may migrate away from the curb to make way for drop-off zones and delivery spaces. Automobile owners may need to store motor vehicles for longer terms as they utilize the convenience of ride-hail services and on-demand deliveries. Parking spaces may be needed for automated vehicles and hourly car rental companies. Car parking will still be needed but the length at which the parking spaces are needed may differ.

3

Curb Competition

What is the effect of these transportation service platforms on the urban landscape and how can the FDOT plan, design and construct accommodations for these new services? Is the “state of traffic” any better in the urban dense areas of Florida? Transportation planners’ focus on urban traffic and throughput may be shifted to curb management.

Over the past few years, the curb has come to the forefront as one of the most contested pieces of real estate in large urban areas. With the traditional curb fixtures such as bus stops, parking, mail and package delivery, newsstands, lighting and trash cans; there’s now added pressure on curb access. Ride-hail services, bike lanes, bike-share stations and car-shares are making their way in the rapidly evolving urban landscape. This increased demand often translates into added congestion at the curb, which can have rippling effects on traffic flow and safety.

The curb is evolving from an urban ROW fixture accommodating short-term parking and deliveries to a shared interactive transaction space for the variety of emerging ride-hail and mobility service platforms. The dynamics for these TNC trips are different. TNC drivers spend several minutes of every hour identifying their passengers, waiting for them to get in their vehicle, then confirming their pickup on their phones and opening their navigation app. The shift towards online shopping and associated deliveries, the high number of curbside pickups, drop-offs and dwell times has added to the increased need for access to street and curb space.

TNCs don’t have a “home” on streets. Furthermore, freight vehicles don’t seem to have enough commercial loading zones and parking places to accommodate booming e-commerce. While silver bullets for roadway safety and congestion are in short supply, a solution to help alleviate some of the congestion, safety risks, and inefficiencies that come with the digital economy is Shared Use Mobility Zones (SUMZ). SUMZ are a flexible curb management feature that can help cities mitigate congestion, improve accessibility and improve roadway throughput.¹⁰ Other features can be re-allocating street space by adding dedicated queuing lanes and drop-off spaces.

Large urban centers in metropolitan areas (and airports) are where the greatest density of TNC trips occur.¹¹ These are also areas where many other public transit, car, cycling and walking trips occur. Competition for the curb and the street is particularly acute in these areas. In mid-size urban areas, traffic pressure may be less pronounced but the need to provide high quality mobility in less-dense and spread-out urban areas may be significant. In small urban areas car use and traffic pressure is still comparatively low and demand for street and curb space is often manageable.

TNC services continue to grow. The introduction of new service platforms and business models have brought about the need for a serious look at curb access. Some of the new transportation services competing for curb access are:

- Ride-hail basic sedan service: UberX, Lyft (shared use mobility zones),
- On-demand meal delivery: Uber Eats, Bite Squad (restaurant delivery),
- Demand Response Transit – ride share vans,
- Bike share racks,
- Dockless bikes,
- Urban scooter rentals,
- Ride-hail Taxi: UberTaxi,
- Van pooling, and
- Charging Stations.

Cities, counties and public authorities may need to shift away from street space and curb use focused on parking to more flexible allocation that includes pick-up and drop-off zones for passengers and deliveries. Many cities address these hotspots in a piecemeal fashion and may underestimate longer-term changes that are underway.¹² Any changes will require an increasingly strategic approach towards the allocation of public space in cities, on their streets and, ultimately, at the curb.

This shift is one that must be anticipated and planned for since it will require new strategies to manage public space devoted to transit and other functions. An appropriate regulatory framework that enables innovation also needs to be developed that sets public policy objectives.

State and local transportation agencies have long planned and managed what's happening between the curbs – collecting data on speed, volume, vehicles and roadway characteristics. Perhaps it's time to collect data on the rest of the ROW and along a roadway corridor. With accurate, real-time and historical data, new innovative curb management policy and strategies can be developed to redefine, plan and regulate curbs and parking.

The fast-paced changes in our urban areas are making it challenging to plan and build infrastructure that can keep up. Counties and cities need to learn how to inventory, assess, enhance, and prioritize curb spaces to meet the multi-modal demands at the curb in a safe and efficient way. Local agencies will need to have the tools to apply regulatory, operations, and technology strategies to optimize curb access and usage to best accommodate the emerging transportation services for moving people and goods in the new urban environment.

4

First Mile/Last Mile Connectivity

Partnerships between TNCs and transit agencies can benefit both parties by lowering operational costs, identifying new passengers, and providing improved service. For TNCs, transit users are likely to need their service at the beginning and/or end of a transit trip to reach their final destination.¹³ For transit agencies, TNCs can increase transit ridership by connecting passengers to transit stations and improving connections to transit in areas with limited availability and/or in low-density neighborhoods.

Several Florida counties and cities are developing innovative projects aimed at better serving their residents through direct incentives and finding viable, cost-effective mobility solutions for moving people through their region. The focus from many local entities is providing a transportation infrastructure that includes an efficient, interconnected roadway network optimizing multimodal transit alternatives.

In 2017 about 6 percent of Florida Uber riders reportedly used the app to get to bus or train lines — and 78 percent said the app helped them access places that would have been difficult to reach before.¹⁴ Florida transit agencies want to increase that percentage by exploring ways to partner with TNCs to augment their existing service routes, to fill gaps in service, or to provide incentives for increasing fixed route transit.

A goal of TNC partnerships is to get more people onto transit and out of their personal cars to reduce highway congestion, and to expand transit service reach in their community. Below are some Florida examples of innovative ways TNC partnerships with cities and transit agencies are extending their geographic reach for better first mile/last mile connectivity:

- February 2016, the Pinellas Suncoast Transit Authority (PSTA) partnered with Uber and United Taxi to launch Direct Connect, a program that provides easy access to bus stops in an area that is about 15 square miles.
- In 2016, Hillsborough Area Transit Authority (HART) launched their HyperLINK project - an expanded program around the University of South Florida campus to get riders to and from bus stops using Tesla Model X vehicles.
- August 2017, Altamonte Springs, Lake Mary, Longwood, Maitland and Sanford launched an inter-city mobility pilot subsidizing Uber fares for trips between any of the five cities and for rides to/from SunRail stations. The pilot project ended on July 5, 2018.

HART, PSTA and several cities throughout Florida have recently launched pilot initiatives and projects that address and incentivize connecting customers with buses, with a goal of better first mile/last mile connectivity. These partnerships include contracting with TNCs to offer ride discounts for ride-hail customers wanting to connect with local transit or commuter rail.

In 2016 HART, serving Florida's Tampa region, rolled out HyperLINK, a pilot program offering door-to-door service within set zones for \$3 per ride using small van-type vehicles, linking riders to a bus station to access the broader HART system. By most measures, the project was a success, said Greg Brackin, with HART. HART discontinued the HyperLINK service at the end of July this year, due to rising costs.¹⁵ A pilot project has also been initiated for micro-transit van pool services to accommodate para-transit or severely disabled riders.

In 2016, another project was developed exploring ways to integrate TNCs and transit to increase urban mobility choice. The city of Altamonte Springs developed a TNC partnership project to extend the reach of SunRail stations, boost ridership and to explore cheaper alternatives to moving people around cities. Five cities, Altamonte Springs, Lake Mary, Longwood, Maitland and Sanford, partnered with Uber to offer a 20% discount on rides within the city limit and a 25% discount on all rides to/from SunRail stations.¹⁶ The five cities are working together to assemble a more open-ended discount program that would be available to any TNC that summons rides via an app.

These pilots reflect the perspective that some see a transit agency's role as providing Mobility as a Service (MaaS) with an objective to locally move people within an urban setting and to incentivize transit ridership.

Florida's focus on commuter and interregional rail, as part of defining urban transit policy with rail extensions and rail projects, may underscore rail's renaissance and renewed appreciation that's spurring community growth immediately surrounding fixed transit stops. As commuter rail systems are being maximized, they are expanding beyond defined governmental and economic centers, with residential areas within and throughout megaregions. TNCs are building efficiencies into the city center infrastructure and filling mobility gaps by better connecting people to transit stops, airports and economic centers.

In the literature review for this report, there's a sense of inevitability that transit agencies will fold ride-hailing into some aspect of their operations. TNC/transit tie-ins will eventually be the default in smaller markets. Many of the partnerships so far have been pilot programs, giving government agencies experience in this area so they can figure out what can be successful in the long term.¹⁷

Governance/Regulation

The long-term risk of these TNC platforms adding more urban VMT with cheaper mobility is increasingly overwhelming traffic volumes and potentially making these neighborhoods less desirable places to live, work and do business. Without public policy intervention, the initial introduction of TNCs is almost certain to greatly exacerbate big-city traffic congestion. Cheaper, better ride-hail service may draw patrons from both personal autos and transit, but in either case will add mileage to city streets.

The 2018 Florida Legislature passed [s. 627.748, F.S.](#) that preempts all local TNC regulations and requirements and ensures all Floridians and visitors have access to ride-hailing. This law establishes the regulatory framework and statewide standards for the operation of TNCs in the state of Florida, ensures consistency across jurisdictional boundaries and provides regulatory certainty for TNC services. Uber and Lyft have argued that being subjected to different rules in all 67 counties and more than 400 cities and towns made it hard to do business. Colin Tooze, spokesman for Uber said, *“We go from a patchwork of local regulations that were in conflict to each other to a statewide regime that provides harmony, stability and certainty for riders and drivers alike.”*¹⁸

For Uber drivers, the law settles uncertainty in some jurisdictions, including Key West and Broward and Hillsborough counties, which at varying times in recent years banned Uber and Lyft or ticketed their drivers. Under the law, regulation of ride-sharing would fall to the Florida Department of Financial Services. Below are some details outlined in the statute:

[Section 627.748, Florida Statutes:](#)

- Defines “Transportation Network Company” and other terms in the industry,
- Outlines the rules of operations such as fare transparency, vehicle and driver identification, and electronic receipts,
- Overrides local laws and state regulation for:
 - Driver requirements and employment status, background checks, driving history,
 - Insurance requirements and how vehicle crashes are reported,
 - Non-discrimination,
 - Preemption: No county, municipality or special district can:
 - Impose any tax or require licensing (or similar),
 - Subject a TNC or driver to any rate, or entry requirement, or
 - Require TNCs or TNC drivers to need a business license.
- Allows for airports or seaports to charge reasonable pickup fees as applied to taxi cabs,
- Allows airports or seaports to designate locations for staging, pickups/drop-offs or operations.

As outlined above, the law allows an airport or seaport to charge reasonable pickup fees consistent with any pickup fees charged to taxicab companies at that airport or seaport for their use of the airport or seaport's facilities. The legislation also allows the airport or seaport to designate locations for staging, pickup, and other similar operations at their facilities allowing better managed traffic flow to and from their facilities.

While the law goes a long way toward protecting, defining and regulating TNC services, some say the new law does not do enough for safety. Limousine and taxi companies complain that ride-hailing services do not operate under the same safety standards they are required to comply with. TNC vehicles are not subject to the same inspections that taxi cab and limo service vehicles must pass before being deemed safe for travel. The number of miles driven by these vehicles may result in automotive malfunctions or vehicle breakdowns, and may not be as well maintained as service vehicles provided by traditional taxi companies.

Drivers working for a ride-hailing service are subject to higher liability insurance minimums than typical drivers. Under the new law, ridesharing drivers are required to obtain \$50,000 coverage for death and bodily injury per person, \$100,000 for death and bodily injury per accident, and \$25,000 for property damage. These limits are substantially higher than Florida's standard automobile insurance minimum requirements and should provide greater protection for TNC passengers.

As local governments continue partnering with TNCs there's also an inevitability that some data is going to be available and additional regulation will be needed as this transportation market segment evolves further. Will similar statewide regulation be needed for other mobility services such as bike share, scooters, food delivery, and car rentals? It is likely that more legislation is to come for the emerging transportation services and their impact on Florida's urban environment, major hubs and economic centers.

Summary

There are six key considerations for transportation planners to better understand TNCs and emerging transportation services:

1. Ride-hail data is unavailable (driver or passenger data),
2. These are emerging transportation services markets, they will likely evolve and mature to something that is different from today,
3. Designating and managing ride service/pick-up/drop-off zones is a good first step in accommodating these new emerging transportation services,
4. Ride-service partnerships may extend first/last mile links to public transit and fill service gaps,
5. TNCs and transit agencies can benefit from integrating their mobility services into one app,
6. The new 2018 Legislation ensures statewide consistency across jurisdictional boundaries and provides regulatory certainty for TNC services.

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