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## Regulations for Smart Mobility: Proceed with Caution

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# Regulations for Smart Mobility: Proceed with Caution

*Connor Saenz\**

## I. INTRODUCTION

On October 1, 1908, Ford completed the first production of its “Model T,” an automobile made for ordinary people to drive every day.<sup>1</sup> At that time, U.S. census data estimated that forty-six percent of America’s population lived in an urban area.<sup>2</sup> In 2017, that number increased to eighty-two percent.<sup>3</sup> As urban populations grew and automobiles became commonplace, increased road traffic and transportation issues became huge problems in cities across the country.<sup>4</sup> In fact, it is estimated that the United States lost \$305 billion in 2017 because of traffic congestion, and the average American wasted thirty-four hours spent stuck in traffic.<sup>5</sup> Those thirty-four hours could have been spent working, spending time with family or friends, or enjoying a hobby.

“Smart mobility” denotes technology that aims to combat issues of transportation, like traffic and even air pollution, in large cities.<sup>6</sup> Smart mobility not only includes popular ride-sharing services, like Uber or Lyft, but also car-sharing programs, like Zipcar and Car2go, and bike and scooter sharing programs, like Bird and Lime.<sup>7</sup> In the near future, smart mobility will also include driverless cars, which are currently being developed by large companies like Google and Tesla.<sup>8</sup> This Comment will begin with a brief history of smart mobility, including current popular ridesharing services like

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1. *Ford Motor Company Unveils the Model T*, HISTORY (July 28, 2019), <https://www.history.com/this-day-in-history/ford-motor-company-unveils-the-model-t>.
2. U.S. CENSUS BUREAU, 1990 CENSUS OF POPULATION HOUSING UNIT COUNTS, TABLE 4. POPULATION: 1790 TO 1990 5 (1993).
3. *Urban Population (% of Total Population)*, WORLD BANK, <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=US> (last visited Feb. 15, 2020).
4. *What is Smart Mobility*, GEOTAB (Aug. 21, 2018), <https://www.geotab.com/blog/what-is-smart-mobility>.
5. *Id.*
6. Isaac Bock, *Growing Pains: The Future of Electric Scooters and Bike Sharing*, FOUNDER SHIELD (Aug. 22, 2018), <https://foundersshield.com/future-of-electric-scooters-and-bike-sharing>.
7. *Id.*
8. *Id.*; WAYMO, <https://waymo.com> (last visited Feb. 15, 2020).

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Uber and Lyft, as well as dockless equipment like bikes and scooters provided by companies like Lime and Bird. Next, this Comment will discuss an overview of current legal issues facing smart mobility technologies and then move on to examples of conflicts between governments and smart mobility platforms, as well as provide several examples of cities currently regulating smart mobility services. Additionally, this Comment will highlight important aspects of the National Association of City Transportation Officials' (NACTO) guidelines for regulations on smart mobility and compare these guidelines to the current practices of Dallas, Texas. This Comment will conclude with several thoughts on future issues requiring attention as the adoption of driverless cars become more prevalent.

## II. BRIEF HISTORY OF SMART MOBILITY

### A. Uber and Lyft

Uber and Lyft are two ridesharing companies that provide consumers with a car service similar to that of a taxi company.<sup>9</sup> The Lyft app officially launched in 2012; however, it originally started as a side project for “Zimrides,” a carpooling service founded in 2007 that targets college students for long-distance ride-sharing.<sup>10</sup> The Lyft team provided the first regulatory window in San Francisco to test ride-sharing, a practice that most people believed to be illegal for drivers without a taxi license.<sup>11</sup> Uber, arguably the more recognized brand of the two, launched “UberCab” in San Francisco in March 2009, later dropping the “cab” to become simply “Uber” in October 2010.<sup>12</sup>

In 2015, a Pew survey found that while two-thirds of American adults had heard of the ride-share apps Uber and Lyft, only fifteen percent of the population had ever actually used one.<sup>13</sup> In 2018, research done by Earnest found that forty-three percent of adults that used debit and credit cards had

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9. *See A Guide for How to Use Uber*, UBER, <https://www.uber.com/us/en/ride/how-it-works/> (last visited Feb. 15, 2020); *Rider*, LYFT, <https://www.lyft.com/rider> (last visited Feb. 15, 2020).

10. Shane Dingman, *Seven Things You Need to Know as Lyft Makes Move into Canada*, GLOBE & MAIL (Nov. 14, 2017), <https://beta.theglobeandmail.com/report-on-business/six-things-you-need-to-know-as-lyft-makes-move-into-canada/article36939398>.

11. *Id.*

12. *Uber*, CRUNCHBASE, <https://www.crunchbase.com/organization/uber> (last visited Sept. 21, 2019).

13. Rani Molla, *Americans Seem to Like Ride-Sharing Services Like Uber and Lyft. But It's Hard to Say Exactly How Many Use Them*, RECODE (June 24, 2018), <https://www.recode.net/2018/6/24/17493338/ride-sharing-services-uber-lyft-how-many-people-use>.

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used a ridesharing app.<sup>14</sup> In 2018, Uber’s drivers completed fifteen million trips each day worldwide, and the company’s share of the U.S. ride-sharing market is between sixty-nine and seventy-four percent, with seventy-five million users.<sup>15</sup> Comparatively, Lyft’s drivers completed one million trips each day and currently has twenty-three million users.<sup>16</sup>

## B. Dockless Bikes and Scooters

In 2017, companies like Lime introduced dockless bike systems in cities across the United States, growing exponentially due to large investments from companies like Uber and Google.<sup>17</sup> In 2018, companies like Lime, Bird, and Jump began offering dockless scooters in addition to the existing bikes.<sup>18</sup> Due to the newness of the dockless ride-sharing equipment, there is not much third-party data on use throughout the United States.<sup>19</sup> Lime (which currently offers both bikes and scooters), however, reported in 2017 that it experienced one million rides in under six months of operation.<sup>20</sup> Specifically, in Dallas, Texas, the company reported 105,000 cumulative miles ridden on Lime bikes.<sup>21</sup> Lime further boasts that it has saved 17,100 gallons of gas, enough to fill 700 full-sized SUVs, which translates to 330,000 pounds of carbon dioxide emission eliminated.<sup>22</sup> Bird launched in September 2017 and accom-

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14. *Id.* (explaining that data shows an overall rise in the use of ride sharing services, and that cardholders are particularly likely to use such services because “card holders tend to live in urban settings and are wealthier than the population at large, so they would likely have more exposure to ride sharing services”).
15. Mansoor Iqbal, *Uber Revenue and Usage Statistics (2019)*, BUS. OF APPS (May 10, 2019), <http://www.businessofapps.com/data/uber-statistics/#2>.
16. *Id.* (also noting that Uber is in 600 cities in sixty-five countries worldwide while Lyft is only in three hundred U.S. cities and two Canadian ones).
17. Luz Lazo, *Dockless Bike, Scooter Firms Clash with U.S. Cities Over Regulations*, WASH. POST (Aug. 4, 2018), [https://www.washingtonpost.com/local/trafficandcommuting/dockless-bike-scooter-firms-clash-with-us-cities-over-regulations/2018/08/04/0db29bd0-9419-11e8-a679-b09212fb69c2\\_story.html?noredirect=on&utm\\_term=.8e98164867a5](https://www.washingtonpost.com/local/trafficandcommuting/dockless-bike-scooter-firms-clash-with-us-cities-over-regulations/2018/08/04/0db29bd0-9419-11e8-a679-b09212fb69c2_story.html?noredirect=on&utm_term=.8e98164867a5).
18. *Id.*
19. *The Year End Report*, LIMEBIKE (Dec. 19, 2017), <https://www.limebike.com/hubfs/EOY%20Data%20Report.pdf> (“This report . . . constitutes the first quantitative and qualitative review of dockless bike sharing in the United States.”).
20. *Id.* at 9.
21. *Id.* at 18.
22. *Id.* at 10.

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plished ten million scooter rides a year in September 2018.<sup>23</sup> Despite the gap in data, it is not hard to imagine that companies like Lime and Bird will continue to grow much like their cousins Uber and Lyft.

### C. Goals for the Future

As these smart mobility companies continue to grow and become more popular, they will expand operations.<sup>24</sup> When discussing the future, the Uber's website indicates that they are "working to bring the future closer with self-driving technology and urban air transport, helping people order food quickly and affordably, removing barriers to healthcare, creating new freight-booking solutions, and helping companies provide a seamless employee travel experience."<sup>25</sup> Additionally, Lime's CEO, Toby Sun, said in an interview that Lime strives "to become the default short-trip, on-demand service for getting people around cities."<sup>26</sup> Once they accomplish this, Lime wants "to transform from a mobility platform to a lifestyle brand, where people can use one bike to make friends, choose another to stay healthy, choose another to get other things done."<sup>27</sup> While the average person is still most likely a long way off from ordering an Uber helicopter with their smartphone, the future of ride-sharing and smart mobility is bright and waiting to be developed and regulated.<sup>28</sup>

## III. OVERVIEW OF CURRENT LEGAL ISSUES IN SMART MOBILITY

### A. Provider Liability in the Ride Sharing Market

As ridesharing companies grow and expand their operations, so will the number of lawsuits alleging tort claims that occur in connection with the ridesharing technology. On November 14, 2017, a class action lawsuit was filed against Uber in the Federal District Court for the Northern District of California.<sup>29</sup> The complaint alleges that "thousands of female passengers have endured unlawful conduct by their Uber drivers including rape, sexual

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23. Megan Rose Dickey, *Bird Hits 10 Million Scooter Rides*, TECHCRUNCH (Sept. 20, 2018), <https://techcrunch.com/2018/09/20/bird-hits-10-million-scooter-rides>.

24. *See About Us*, UBER, <https://www.uber.com/about> (last visited Feb. 15, 2020); Scott Beyer, *An Interview with Toby Sun, Co-Founder of LimeBike*, FORBES (Nov. 17, 2017), <https://www.forbes.com/sites/scottbeyer/2017/11/17/an-interview-with-toby-sun-co-founder-of-limebike/#549b40751075>.

25. *About Us*, *supra* note 24.

26. Beyer, *supra* note 24.

27. *Id.*

28. *See Lazo*, *supra* note 17.

29. Class Action Complaint Seeking Injunctive and Declaratory Relief; Complaint for Damages at 21.

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assault, physical violence and gender-motivated harassment.”<sup>30</sup> The complaint blames Uber due to the “low-cost, woefully inadequate background checks on drivers” and a failure to “monitor drivers for any violent or inappropriate conduct after they are hired.”<sup>31</sup> The complaint further alleges that the reason Uber has gotten away with these practices is because it calls itself a “technology platform” company rather than a “transportation” company, thus allowing it to avoid regulatory oversight that would require more stringent methods of background checks and driver monitoring.<sup>32</sup> The complaint proceeds to point out that in April 2017, the Massachusetts Department of Public Utilities subjected Uber and Lyft drivers to state-run background checks.<sup>33</sup> This process revealed that more than 8,000 drivers failed the state-run check but had passed the Uber and Lyft checks.<sup>34</sup> Among the 8,000 drivers who failed the state-run background check, 1,599 drivers had a history of violent crimes and fifty-one were registered sex offenders.<sup>35</sup> Further, the complaint alleges that because Uber refuses to commercially insure drivers, it creates a substantial deficit of appropriate insurance coverage.<sup>36</sup> In contrast, regulated taxi and limousine companies are required by law to comply with commercial insurance minimums.<sup>37</sup> This is only one of many lawsuits filed against Uber over the past couple of years for personal injury claims.<sup>38</sup>

Ride-sharing companies like Lyft and Uber operated outside of the public permit process with which traditional commercial transportation companies must comply.<sup>39</sup> This resulted in drivers with no government-sanctioned permits, aside from their own personal driver’s licenses, and subject only to the ridesharing company’s background checks, training, and discipline.<sup>40</sup> Further, the ridesharing services decided their own specifications, inspections, drivers’ hours, and amount of insurance coverage required.<sup>41</sup>

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30. *Id.* at 2.

31. *Id.*

32. *Id.* at 3.

33. *Id.* at 21.

34. *Id.*

35. Class Action Complaint Seeking Injunctive and Declaratory Relief; Complaint for Damages, *supra* note 29, at 21.

36. *Id.* at 34.

37. *Id.*

38. *See, e.g.,* Complaint, *De Pena v. Uber Techs., Inc.*, Docket No. 3:18-cv-02104 (D.C. Conn. Dec. 21, 2018).

39. Mark Macmurdo, *Hold the Phone! “Peer-to-Peer” Ridesharing Services, Regulation, and Liability*, 76 *LA. L. REV.* 307, 311 (2015).

40. *Id.*

41. *Id.*

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In 2012 the California Public Utilities Commission (CPUC), which regulates the state's transportation services, had to decide whether ridesharing services were subject to the regulatory scheme established for traditional for-hire transportation services.<sup>42</sup> Uber and Lyft argued that the CPUC lacked the authority to regulate the ridesharing companies because they were information providers, not common carriers.<sup>43</sup> The CPUC disagreed, finding that the ridesharing companies were subjected to the state's regulations of for-hire transportation providers.<sup>44</sup> The CPUC created a new category of carriers known as "Transportation Network Companies" (TNC) in September 2013, with many other governmental entities across the country following suit.<sup>45</sup> The CPUC's approach to regulation requires that the ride-share company itself obtain a license rather than individual drivers.<sup>46</sup> The application process ensures some basic compliance with regulations, including proof of insurance.<sup>47</sup>

Currently, Uber covers its drivers under two insurance policies.<sup>48</sup> One policy provides coverage for bodily injury up to \$50,000 per individual per accident and up to \$25,000 for property damage.<sup>49</sup> Uber's second policy for driver coverage is a \$1 million commercial policy, which only covers drivers from the time they accept a ride through the time the ride terminates.<sup>50</sup> Additionally, these companies conduct background checks of their drivers.<sup>51</sup> Uber's background check, however, is similar to those used by credit card companies in that it only goes back seven years and does not capture all arrests and convictions.<sup>52</sup> Further, the check can vary based on local regulations.<sup>53</sup> For example, in 2016, Uber and Lyft left Austin, Texas, when the city voted to require drivers to undergo fingerprint background checks rather than settle for the less stringent ride-sharing companies' background checks.<sup>54</sup> But

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42. *Id.* at 314–15.

43. *Id.* at 315.

44. *Id.*

45. Macmurdo, *supra* note 39, at 315.

46. *Id.*

47. *Id.*

48. Sterling A. McMahan, *Moving to Dismiss: Ridesharing and Assaults, and the Emerging Legal Frontier*, 37 TRIAL ADVOC. Q. 11, 11 (2018).

49. *Id.*

50. *Id.*

51. *Id.*

52. *Id.* at 11–12.

53. *Id.*

54. McMahan, *supra* note 48, at 11–12; Heather Kelly, *Uber and Lyft to Leave Austin after Losing Vote on Fingerprinting*, CNN BUS. (May 8, 2016), <https://>

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when a state law overturned the requirement, the companies resumed operations.<sup>55</sup>

Ride-sharing companies may also use independent contract agreements with their drivers in an attempt to shield themselves from liability.<sup>56</sup> In this regard, the companies would not control the hours the drivers work or provide usual benefits; however, they would require their drivers to follow rules and procedures while driving, including limits on accepting rides, calculation of fares, and termination at will.<sup>57</sup> In Florida, for example, a company hiring an independent contractor (IC) is not liable for the torts committed by the IC unless the IC was acting within the scope of their employment.<sup>58</sup> Florida's precedent establishes that sexual assaults and batteries by employees are considered outside the scope of an employee's employment and thus is insufficient to impose vicarious liability on an employer.<sup>59</sup>

## B. Property Ownership and Carsharing

Individual car ownership has long been a social indicator of property and economic status in the United States.<sup>60</sup> The average American adult spends about ten percent of his/her income on an automobile.<sup>61</sup> But, as the availability of on-demand automated vehicles grow, there will be a shift from mobility as personal property to mobility as a service.<sup>62</sup> Ridesharing companies like Uber and Lyft have already tapped into this market, but now car manufacturers like General Motors have begun tapping in as well.<sup>63</sup>

General Motors rolled out a business plan to investors in 2017 that aimed to have fully-autonomous ride-sharing services in multiple cities by the end of 2019.<sup>64</sup> "Carsharing" is a system of car rentals in which members of services can rent vehicles for short periods of time, often being charged by

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[money.cnn.com/2016/05/08/technology/uber-lyft-austin-vote-fingerprinting/index.html](http://money.cnn.com/2016/05/08/technology/uber-lyft-austin-vote-fingerprinting/index.html).

55. McMahan, *supra* note 48, at 12.

56. *Id.*

57. *Id.*

58. *Id.* at 13.

59. *Id.*

60. Daniel A. Crane, *The Future of Law and Mobility*, 2018 J. L. & MOB. 1, 6 (2018).

61. *Id.*

62. *Id.* at 7.

63. Ryan Felton, *GM Aims to Get Ahead of Everyone with Autonomous Ride-Sharing Service in Multiple Cities by 2019*, JALOPNIK (Nov. 30, 2017), <https://jalopnik.com/gm-aims-to-get-ahead-of-everyone-with-autonomous-ride-s-1820886131>.

64. *Id.*



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the hour or mile.<sup>65</sup> Compared to other smart mobility technologies, carsharing faces the fewest policy hurdles, due in part to its legal classification as a “rental” rather than a “service.”<sup>66</sup> This allows General Motors to avoid issues associated with the regulation of transportation services like Uber and Lyft.<sup>67</sup>

One potential implication of the shift from personal vehicles to service-provided vehicles is that insurance coverage will have to change from a personal insurance policy covering a personal vehicle to carsharing companies acquiring insurance coverage for their entire fleet of shared vehicles.<sup>68</sup> For example, ZipCar, a company that provides “on-the-go” cars to its members, indicates that every member in good standing and who complies with the membership contract is covered by the company’s insurance policy.<sup>69</sup> Specifically, the users receive liability coverage up to the minimum financial responsibility limits required in the state/jurisdiction in which the action occurs.<sup>70</sup> This, however, may not always work as easily as it seems. In fact, there is at least one lawsuit filed against ZipCar in the United States District Court for the District of Columbia for failure to compensate the plaintiffs for their injuries sustained as the result of an accident in one of their cars.<sup>71</sup> In these types of cases, plaintiffs will need to sue the carsharing companies themselves as opposed to the individual’s insurance provider or the one of the other parties involved.<sup>72</sup> The legal problem of insurance issues related liability was severe enough that it prompted at least one service to withdraw services in the state of New York.<sup>73</sup> However, in most states these issues are gradually being resolved and, thus, should not pose an existential threat to the sector.<sup>74</sup>

Another issue that will develop with the rise of carsharing implicates Fourth Amendment search and seizures in relation to vehicles.<sup>75</sup> Currently,

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65. Joseph P. Schwieterman & Mollie Pelon, *First Zipcar, Now Uber: Legal and Policy Issues Facing the Expanding “Shared Mobility” Sector in U.S. Cities*, 4 BELMONT L. REV. 109, 112 (2017).

66. *Id.* at 118.

67. *Id.*

68. See John Matley et al., *Insuring the Future of Mobility*, DELOITTE INSIGHTS (May 14, 2016), <https://www2.deloitte.com/insights/us/en/focus/future-of-mobility/mobility-ecosystem-future-of-auto-insurance.html>.

69. *Insurance Coverage*, ZIPCAR, <https://support.zipcar.com/hc/en-us/articles/220433387-Insurance-Coverage> (last visited Feb. 15, 2020).

70. *Id.*

71. See Complaint, Luo et. al. v. Carter et. al., No. 1:09-cv-00399 (D.D.C. Feb. 2, 2009).

72. See Matley et al., *supra* note 68.

73. Schwieterman & Pelon, *supra* note 65, at 118.

74. *Id.*

75. Crane, *supra* note 60, at 5.

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individual rights against searches and seizures rely on distinctions between drivers and passengers, or owners and occupants.<sup>76</sup> “For example, a passenger in a car may challenge the legality of the police stop of the car but have diminished expectations of privacy in the search of the vehicle’s interior if they are not the vehicle’s owner.”<sup>77</sup>

A recent case decided by the Supreme Court in 2018 dealt with a petitioner’s expectation of privacy in a rental car despite his name not being on the rental agreement.<sup>78</sup> Terrence Byrd’s fiancé rented a car from a New Jersey car-rental facility.<sup>79</sup> Thereafter, Byrd took control of the vehicle and embarked on a solo trip from New Jersey to Pittsburgh.<sup>80</sup> During his trip, Byrd was stopped by a Pennsylvania state trooper for driving in the left lane.<sup>81</sup> During the stop, the trooper and his partner learned that the car was rented, that Byrd was not listed as the authorized driver, and that he had prior drug and weapons convictions.<sup>82</sup> Byrd also admitted to having a marijuana cigarette in the car.<sup>83</sup> The troopers performed a search of the car, discovering body armor and forty-nine bricks of heroin in the trunk.<sup>84</sup> The district court denied Byrd’s motion to suppress the evidence as the fruit of an unlawful search, which the Third Circuit affirmed, holding that because Byrd was not on the rental agreement, he lacked a reasonable expectation of privacy in the car.<sup>85</sup>

In his brief, Byrd argued that his reasonable expectation of privacy guaranteed by the Fourth Amendment did not hinge on whether he owned the car.<sup>86</sup> He argued that what mattered was whether he had “possession and control” over the car, which he did.<sup>87</sup> The government disagreed, arguing that this logic would suggest that even a car thief would have Fourth Amendment

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76. *Id.*

77. *Id.* (citing *Brendlin v. California*, 551 U.S. 249 (2007); *United States v. Jones*, 565 U.S. 400 (2012)).

78. *Byrd v. United States*, 138 S. Ct. 1518, 1521 (2018).

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.*

83. *Id.*

84. *Byrd*, 138 S. Ct. at 1521.

85. *Id.*

86. Amy Howe, *Argument Preview: For Fourth Amendment Purposes, Does It Matter Who Is on the Car-Rental Agreement?*, SCOTUSBLOG (Jan. 3, 2018), <https://www.scotusblog.com/2018/01/argument-preview-fourth-amendment-purposes-matter-car-rental-agreement>.

87. *Id.*

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rights because the thief would have possession and control of the car.<sup>88</sup> Byrd further contended that if the Third Circuit's decision were allowed to stand, a driver would not have any reasonable expectation of privacy if he violated the terms of the rental agreement, which is a common occurrence.<sup>89</sup> This could create additional burdens for police officers, by requiring them to ascertain exactly what the terms and conditions of the rental agreements are and whether the driver is complying with them.<sup>90</sup> This may create a difficult situation for cases involving cars and ride-sharing services like ZipCar.<sup>91</sup> These services use agreements stored online rather than kept in the car and can differ from service to service.<sup>92</sup> Thus, Byrd suggested the easier option of a bright-line rule holding that the driver of a rental car has a reasonable expectation of privacy when they drive it with permission from either the owner or person renting it.<sup>93</sup>

The Court held that the mere fact that a driver, in lawful possession or control of a rental car, is not listed on the rental agreement will not defeat his or her otherwise reasonable expectation of privacy.<sup>94</sup> The Court rejected the government's contention that drivers who are not listed on rental agreements always lack an expectation of privacy in the car as too restrictive of a view of the Fourth Amendment's protections.<sup>95</sup> However, Byrd's proposal that a rental car's sole occupant always has an expectation of privacy based on mere possession and control would, without qualification, include thieves or others who have no reasonable expectation of privacy.<sup>96</sup> On remand, the Third Circuit was directed to address whether the troopers had probable cause that justified their warrantless search of the car.<sup>97</sup>

Rental car companies are very similar to carsharing services like Zip-Car. Drivers are required to enter into rental agreements with rental car companies just like users with carsharing services are required to consent to user agreements in order to use the service.<sup>98</sup> Thus, *Byrd v. United States* is strong

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88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.*

92. Howe, *supra* note 86.

93. *Id.*

94. *Byrd v. United States*, 138 S. Ct. 1518, 1521 (2018).

95. *Id.* at 1522.

96. *Id.*

97. *Id.* at 1530–31.

98. See, e.g., *Zipcar Membership Contract*, ZIPCAR, [https://www.zipcar.co.uk/sites/default/files/pdfs/zipcar\\_uk\\_membership\\_contract\\_-\\_february\\_2017v2.pdf](https://www.zipcar.co.uk/sites/default/files/pdfs/zipcar_uk_membership_contract_-_february_2017v2.pdf) (last visited Feb. 15, 2020); *Rental Terms and Conditions*, BUDGET, <https://www.budget.com/en/legal-documents/rental-terms> (last visited Feb. 15, 2020).

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precedent for a future holding where the issue revolves around whether a user of ZipCar is entitled to Fourth Amendment privacy expectations of the vehicle they are operating, even if they are not the “owner” of the car and/or they are in violation of their user agreements.<sup>99</sup>

### C. Safety Issues of Dockless Bikes and Scooter Services

City sidewalks can be very crowded from the normal city-provided utilities like benches, trashcans, and bike racks. In addition to these, Lime and Bird bikes and scooters, if driven incorrectly or not placed safely on sidewalks and streets, can cause injury to pedestrians.<sup>100</sup> One hospital in Salt Lake City says that it has seen a 161% increase in the number of hospital visits involving scooters since the launch of dockless scooters in the city.<sup>101</sup> Some experts have questioned the “gig” economy<sup>102</sup> that companies like Bird rely on to maintain their fleet of scooters.<sup>103</sup> The company places ads for mechanics on sites like Craigslist that say experience is not necessary, in addition to providing training for new hires via YouTube videos.<sup>104</sup> In Dallas, Texas, a twenty-four-year-old man who fell off a Lime scooter on his way home from work was killed by blunt-force injuries to the head and was possibly the first person to die riding one of these increasingly popular mobility devices.<sup>105</sup> Hours after this incident, a twenty-year-old in Washington was

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99. *See Byrd*, 138 S. Ct. at 1527 (“one who owns or lawfully possess or controls property will in all likelihood have a legitimate expectation of privacy by virtue of the right to exclude.” (quoting *Rakas v. Illinois*, 439 U.S. 128, 143 n.12 (1978))). For further articulation of the Supreme Court’s views on the right to privacy for renters, see Elizabeth G. Rozacky & Michael E. Keasler, *Criminal Procedure: Confessions, Searches, and Seizures*, 5 SMU ANN. TEX. SURV. 115, 123 (2019).

100. *See generally* Cathy Bussewitz & Amanda Morris, *Boom in Electric Scooters Leads to More Injuries, Fatalities*, ASSOCIATED PRESS (June 6, 2019), <https://www.apnews.com/33f376b91e5945efbcb2c460b1d0dcc> (discussing recent injuries and city regulations to protect citizens from injury).

101. Peter Holley, *Hospital ER Reports 161 Percent Spike in Visits Involving Electric Scooters*, WASH. POST (Sept. 24, 2018), [https://www.washingtonpost.com/technology/2018/09/24/hospital-er-reports-percent-spike-visits-involving-e-scooters/?noredirect=ON&utm\\_term=.d2f1a7411747](https://www.washingtonpost.com/technology/2018/09/24/hospital-er-reports-percent-spike-visits-involving-e-scooters/?noredirect=ON&utm_term=.d2f1a7411747).

102. “A gig economy is a free market system in which temporary positions are common and organizations contract with independent workers for short-term engagements.” Margaret Rouse, *Gig Economy*, WHATIS, <https://whatis.techtarget.com/definition/gig-economy> (last visited Feb. 15, 2020).

103. Holley, *supra* note 101.

104. *Id.*

105. *Id.*

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struck and killed by an SUV while riding a Lime scooter and was dragged twenty yards after being pinned under the car.<sup>106</sup>

Further, misplacement of bikes and scooters may hinder disabled Americans from safely traveling on public sidewalks, roads, or other transportation services. The Americans with Disabilities Act (ADA) guarantees disabled Americans access to public services like sidewalks and public transportation.<sup>107</sup> Thus, if dockless bikes and scooters are preventing these Americans from accessing these services, they may have a claim under the ADA.<sup>108</sup> In fact, a lawsuit was filed against the City of San Diego and dockless service providers in the United States District Court for the Southern District of California.<sup>109</sup> The complaint challenges the failure of the city and private companies to maintain accessibility of the City's public sidewalks, curb ramps, crosswalks, and transit stops for people with disabilities in the face of an onslaught of unregulated dockless equipment.<sup>110</sup> In passing the ADA, Congress aimed to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities, and yet individuals with disabilities continually encounter various forms of discrimination, including exclusion and discriminatory effects of architectural, transportation, and communication barriers.<sup>111</sup> The complaint also alleges that the dockless business model violates San Diego Municipal Code §129.0702(a)(2), which states that "no object (e.g. structure, basketball hoop, etc.) is to be placed in the public right of way," yet the City, while enforcing this provision against homeless individuals, has overlooked the actions of dockless service providers and "their severe negative impact on disability access."<sup>112</sup>

However, these dockless service providers may be able to shield themselves from liability with disclaimers in their legal releases that require and instruct users to place the equipment in safe spots that do not hinder people with disabilities from accessing public services.<sup>113</sup> From a legal standpoint, although the equipment may be obstructing the public services, it is not the companies that provide the equipment to individuals who are in violation the

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106. *Id.*

107. *See* 42 U.S.C. § 12101 (2019).

108. *See id.*

109. Complaint for Plaintiffs at ¶ 1, *Montoya v. City of San Diego*, No. 3:19-cv-00054 (S.D. Cal. Jan. 09, 2019).

110. *Id.* at ¶ 3.

111. *Id.* at ¶ 3–4.

112. *Id.* at ¶ 31.

113. Kyle Martin, *For Disabled People, Rent-a-Bikes are More than an Annoyance, but Do They Violate the ADA?*, DALL. MORNING NEWS (Jan. 20, 2018), <https://www.dallasnews.com/news/dallas-city-council/2018/01/20/disabled-rent-bikes-annoyance-violate-ada>.

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ADA, but rather the individual users incorrectly operating or parking the equipment.<sup>114</sup>

#### D. Data Privacy and Security

Smart mobility services like Uber, Lyft, Lime, and Bird all require apps to access their services and equipment.<sup>115</sup> All of these apps require the user to create an account that stores information like the user's name, address, birthdate, email, and credit card information.<sup>116</sup> Obviously, this information is very sensitive to users and access to it can lead to anything from unwanted spamming to identity theft.<sup>117</sup> A "data breach" refers to any hacking attack or incident on an entity's systems that result in the loss, destruction, or compromise of the data or information in its custody or control.<sup>118</sup> These breaches occur due to hackers, malware, social media scams, physical action, and cyber espionage.<sup>119</sup> The perpetrators are usually after data that includes contact information, birthdates, medical data, social security numbers, passport numbers, bank information, and credit card information.<sup>120</sup> According to a study done by the Ponemon Institute, which conducts independent research on data protection and emerging information technologies,<sup>121</sup> the average cost of a data breach for the fiscal year of 2017 was \$3.62 million.<sup>122</sup> Losses incurred by the breached companies may include: legal liability (lawsuits, investigation by regulators, and legal defense fees); investigation/analysis ex-

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114. *Id.*

115. *See Uber*, <http://www.uber.com> (last visited Feb. 15, 2020); *Lyft*, <http://www.lyft.com> (last visited Feb. 15, 2020); *Lime*, <http://www.limebike.com> (last visited Feb. 15, 2020); *Bird*, <http://www.bird.com> (last visited Feb. 15, 2020).

116. *See Uber*, *supra* note 115; *Lyft*, *supra* note 115; *Lime*, *supra* note 115; *Bird*, *supra* note 115 (all requiring users to disclose personal information in order to create an account).

117. *See, e.g., Identity Theft*, FED. TRADE COMM'N, <https://www.consumer.ftc.gov/features/feature-0014-identity-theft> (last visited Feb. 15, 2020) (outlining the dangers of identity theft and the ways in which it can happen); *Trade Security*, FED. TRADE COMM'N, <https://www.ftc.gov/tips-advice/business-center/privacy-and-security/data-security> (last visited Feb. 15, 2020) (outlining company compliance standards to combat consumer identity theft from company stored data).

118. Margaret A. Reetz et al., *Cyber Risks: Evolving Threats, Emerging Coverages, and Ensuing Case Law*, 122 PENN. ST. L. REV. 727, 731 (2018).

119. *Id.* at 732.

120. *Id.*

121. PONEMON INST., <https://www.ponemon.org> (last visited Feb. 15, 2020).

122. Reetz et al., *supra* note 118, at 732 (citing *2017 Cost of Data Breach Study: Global Overview*, PONEMON INST. (June 2017), <https://www.ibm.com/downloads/cas/ZYKLN2E3>).

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penses (forensic and security experts); costs to notify customers or regulators; crisis management; credit monitoring; identity theft support services; class action settlements; and settlements with regulators.<sup>123</sup>

Uber fell victim to a data breach in 2016 that exposed the names, phone numbers, and email addresses of more than 20 million people who used the service.<sup>124</sup> The Federal Trade Commission (FTC) accused Uber of failing to disclose the leak as the agency investigated and sanctioned the company for a similar data breach that occurred in 2014.<sup>125</sup> According to the FTC, Uber failed to monitor employee access to consumers' personal information on an ongoing basis and to secure sensitive data stored in the cloud.<sup>126</sup> After the second breach, the FTC negotiated a settlement with Uber under which it could be subject to civil penalties if it failed to notify the FTC of certain future incidents involving unauthorized access to consumer information.<sup>127</sup>

As these smart mobility services become more popular, their user base will grow, thus increasing in the cumulative amount of data they acquire. This amount of data may be seen as a virtual treasure-trove for hackers and cyber criminals. As such, these companies will need to take precautions to keep this data safe from those outside, and possibly within their companies, that have bad intentions. These companies will also need to procure the proper insurance coverage to protect themselves from liability and loss in the event of a breach. Regulation and oversight from the government and the proper bureaucracies can help to ensure these companies are adequately protecting user data and, in the event of a breach, taking appropriate remedial measures.<sup>128</sup>

#### IV. THE ARGUMENT FOR GOVERNMENT REGULATIONS IN THE AGE OF SMART MOBILITY

In 1901, Connecticut created the first statewide traffic law regulating motor vehicles by limiting their speed to twelve miles per hour in cities and

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123. *Id.* at 732–33.

124. Todd Shields & Eric Newcomer, *Uber's 2016 Breach Affected More than 20 Million U.S. Users*, BLOOMBERG (Apr. 12, 2018), <https://www.bloomberg.com/news/articles/2018-04-12/uber-breach-exposed-names-emails-of-more-than-20-million-users>.

125. *Id.*

126. *Federal Trade Commission Gives Final Approval to Settlement with Uber*, FED. TRADE COMM'N (Oct. 26, 2018), <https://www.ftc.gov/news-events/press-releases/2018/10/federal-trade-commission-gives-final-approval-settlement-uber>.

127. *Id.*

128. *See id.*

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fifteen miles per hour on country roads.<sup>129</sup> In 1910, New York introduced the first drunk driving law, penalizing drivers for operating a vehicle under the influence of alcohol.<sup>130</sup> In 1966, Congress created the federal Department of Transportation, and two years later, the first Federal Safety Standards for automobiles went into effective.<sup>131</sup>

Much like early regulation for automobiles, many of the needed regulations on smart mobility are best handled at the city or state levels, because each locality has unique characteristics and needs.<sup>132</sup> However, there are some areas of regulation (namely sexual assault from ridesharing employees) that may be better handled at the federal level to ensure blanket protections across the country.<sup>133</sup>

#### **A. Current Local Regulations for and Conflicts with Dockless Scooter and Bike Providers**

Currently, several cities have begun taking measures to regulate dockless scooter and bike providers in an effort to make their cities and populations less cluttered and ultimately safer.<sup>134</sup> For example, the city of

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129. *A Drive Through Time*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., <https://one.nhtsa.gov/nhtsa/timeline/index.html> (last visited Feb. 15, 2020).

130. *Id.*

131. *Id.*

132. *See id.* (outlining the evolution of automobile regulation, beginning with the states); *see also* Emily L. Dyer, Note, *Need a Ride? Uber: The Trendy Choice That Could Turn Threatening*, 17 NEV. L.J. 239, 254–55 (2016) (describing the need for specialized, local regulation for Uber in Nevada due to the state's unique characteristics).

133. *See* Inara Scott & Elizabeth Brown, *Redefining and Regulating the New Sharing Economy*, 19 U. PA. J. BUS. L. 553, 574 (2017) (recognizing the need for regulation due to the safety concerns, like sexual assault, for passengers and drivers alike); *see also* Akasha Perez, Comment, *Addressing an Evolution in America's Workforce: A Call for Negotiated Rulemaking in the Ridesharing Industry*, 59 HOW. L.J. 787, 809 n.174–75 (2016) (asserting that “absent legislation, there is no guaranteed protection for consumers in the ridesharing industry”); Cathorene McKay, *Uber: The Superlative Example in the Class of Transportation Network Companies – Why Pennsylvania's New Bill Regulating TNCs Is the Key to their Continued Success in the Sharing Economy*, 19 DUQ. BUS. L.J. 51, 60 n.69 (2017) (detailing a Houston, Texas case where an Uber driver failed to adhere to Houston's fingerprinting and background check requirement and was then accused of sexually assaulting a passenger) (citing *Greater Houston Transp. Co. v. Uber Techs., Inc.*, 155 F. Supp. 3d 670, 677 (S.D. Tex. 2015)).

134. *See, e.g.*, Joe Fitzgerald Rodriguez, *Scooters Vanish from SF Streets as Ban Takes Effect*, SAN FRAN. EXAMINER (June 4, 2018), <http://www.sfexaminer.com/companies-pull-scooters-off-sf-streets-temporary-ban-takes-effect>; *Scooter and Bike Share Services*, CITY OF SANTA MONICA, <https://www>.



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Milwaukee filed a lawsuit against Bird in the United States District Court for the Eastern District of Wisconsin in 2018 for the operation of their dockless scooter service in the city.<sup>135</sup> In a brief for preliminary injunction filed on July 12, 2018, Milwaukee argues that the motorized scooter is a “vehicle” because it is a device in, upon, or by which any person or property is or may be transported or drawn upon a highway, and it is not exempted as a vehicle as defined by a Wisconsin Statute.<sup>136</sup> The operation of unregistered motorized vehicles on public highways (which includes the sidewalk) in Wisconsin is prohibited.<sup>137</sup> Thus, the motion argues that by offering the use of Bird motorized scooters for unlawful use on the city’s streets and sidewalks, the defendants have and continue to aid and abet the ongoing violation of state and local laws and are guilty of a civil municipal forfeiture of each Bird motor scooter rental used on the city streets and sidewalks.<sup>138</sup> Bird answered, arguing that that National Highway Safety Traffic Administration (NHTSA) has taken the position that scooters, such as those owned by Bird, do not constitute “motor vehicles” that must be manufactured to comply with applicable Federal Motor Vehicle Safety Standards.<sup>139</sup> Therefore, they need not be registered.<sup>140</sup> Further, Bird argues that the city has not met the “demanding burden necessary” to obtain such extreme injunctive relief.<sup>141</sup> The Motion for Preliminary Injunction was later withdrawn by the city, and a final pretrial conference was set for July 2, 2019.<sup>142</sup>

A big issue the court will have to decide at trial will be if, under Wisconsin law, a motorized scooter like the ones used by Bird, are “motorized vehicles” which the state can require be registered.<sup>143</sup> If the court finds that the scooters do constitute a “motorized vehicle,” then the state of Wisconsin can regulate them by passing or amending laws that cover motorized vehicles.<sup>144</sup> Further, this precedent could help cities in other states that have simi-

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smgov.net/Departments/PCD/Transportation/Shared-Mobility-Services (last visited Feb. 15, 2020).

135. Motion for Temporary Injunction at 1, *Milwaukee*, No. 2:18-cv-01066.

136. *Id.* at 3; WIS. STAT. § 340.01(74) (2019).

137. WIS. STAT. §§ 340.01(22), 341.04(1) (2019).

138. Plaintiff’s Brief in Support of Motion for Temporary Injunction at 4, *Milwaukee*, No. 2:18-cv-01066.

139. Defendant’s Brief in Opposition to Plaintiff’s Motion for a Temporary Injunction at 7, *Milwaukee*, No. 2:18-cv-01066.

140. *Id.*

141. *Id.* at 1.

142. Trial Scheduling Order at 1, *Milwaukee*, No. 2:18-cv-01066.

143. See WIS. STAT. § 340.01(74) (defining “vehicle” as “every device in, upon or by which any person or property is or may be transported”).

144. See *id.*

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lar laws on “motorized vehicles” to bring Bird and other dockless scooter providers underneath their regulatory wing.<sup>145</sup>

Several California cities have also acted to regulate smart mobility services, including San Francisco (the mother city for many smart mobility services) and Santa Monica.<sup>146</sup> On June 4, 2018, San Francisco enacted a new law that temporarily prohibited electric scooter companies from operating within the city after more than 1,800 complaints were lodged with the city over riders illegally riding on sidewalks and clashing with pedestrians, parking in walkways, and scooters being littered in public areas.<sup>147</sup> This law required the companies to apply for a permit in order to operate.<sup>148</sup> In their application, the companies were encouraged to divulge their specific goals and initiatives to aid San Francisco’s transit needs.<sup>149</sup>

The city then chose two companies, Scoot and Skip, from a field of twelve companies that submitted a combined 800 pages in proposals on the operations, safety, and plans to extend the scooter fleet in San Francisco’s neighborhoods.<sup>150</sup> Popular companies like Lime and Bird were not chosen partly because their proposals failed to provide sufficient rider training, scooter operation rebalancing to fit demand, and service in areas typically underserved by public transit.<sup>151</sup> In contrast, Scoot promised it would force riders to watch instructional videos before allowing them to use the scooters and would use swappable batteries to keep them charged and running.<sup>152</sup> Skip, a San Francisco based company, proposed a community advisory board and promised to extend service well beyond the city’s downtown core.<sup>153</sup>

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145. *Compare id.* (defining “vehicle”), with Plaintiff’s Brief in Support of Motion for Temporary Injunction at 3, *Milwaukee*, No. 2:18-cv-01066 (applying Wisconsin’s definition of “vehicle”). Further, cities have chosen to take differing approaches in regulating dockless scooters. *See, e.g.*, Kate Mancuso, *The Rise of Electric Scooter Regulations*, REGULATORY REVIEW (Jan. 3, 2019), <https://www.theregreview.org/2019/01/03/mancuso-electric-scooter-regulations> (The definition of a vehicle, and how scooters fit in, is key to regulations); *Can You Get a DUI on a Bird or Lime Scooter?*, NAT’L COLLEGE FOR DUI DEFENSE (July 4, 2019), <https://www.ncdd.com/top-dui-attorneys-blog/can-you-get-a-dui-on-a-bird-or-lime-scooter> (describing the issue with categorizing scooters in the context of DUI convictions).

146. Rodriguez, *supra* note 134.

147. *Id.*

148. *Id.*

149. *See* Aarian Marshall, *SF Is Bringing Back Banned Electric Scooters – With Limits*, WIRED (Aug. 30, 2018), <https://www.wired.com/story/san-francisco-santa-monica-e-scooter-permits>.

150. *Id.*

151. *Id.*

152. *Id.*

153. *Id.*

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This permit-based application should be very attractive to larger cities looking for ways to regulate dockless smart mobility equipment. As an initial matter, by requiring all companies to submit an application for a permit to operate within the city, the companies are essentially required to do their research and work up front on the ways they plan to help the city and ensure the safety of citizens. This will help to ensure that companies are aware of the markets they are serving and are doing the most they can to remedy local transit issues, as well as help the communities in which they operate. Further, by choosing only a limited number of applicants to award permits to, companies will have to be competitive in their proposals, thereby increasing their value and ensuring the best companies are operating within the city. Additionally, limiting the number of companies helps to ensure limited fleet sizes within the city, thereby keeping the clutter of the equipment in the public right of way to a minimum.

The other California city leading the way in regulations on dockless mobility services is Santa Monica, with its pilot program to test the deployment and use of these services.<sup>154</sup> On June 26, 2018, the Santa Monica City Council adopted Ordinance 2578, which directed city staff to proceed with the implementation of the pilot program “to forge a model way for regulating these new companies and technologies to protect public safety and promote community wellbeing, sustainability and equity.”<sup>155</sup> The pilot program aimed to diversify mobility options for residents, employees, and visitors of Santa Monica; protect public health and safety; reduce sidewalk, pathway and ADA blockages; reduce emissions from short trips and connections to transit; maximize user awareness of safe and legal behaviors for operating shared mobility devices; create an enforceable framework for managing shared mobility services; ensure the use of public right of way benefits public mobility; and ensure private operators respond to pervasive issues and service complaints.<sup>156</sup>

Eighteen companies applied for permits to operate dockless scooter and/or bike equipment within the city, and the ordinance allowed for a maximum of four companies, two for bikes and two for scooters, to operate within the city.<sup>157</sup> In their applications, the city directed the companies to include a description of the proposed plan of operation including a detailed description of several key areas, including: (1) the applicant’s current operations in the

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154. *Scooter and Bike Share Services*, CITY OF SANTA MONICA, <https://www.smgov.net/Departments/PCD/Transportation/Shared-Mobility-Services/> (last visited Feb. 15, 2020).

155. CITY OF SANTA MONICA, SHARED MOBILITY DEVICE PILOT PROGRAM ADMINISTRATIVE REGULATIONS (Sept. 25, 2018), [https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/SM-AdminGuidelines\\_9-25-2018.pdf](https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/SM-AdminGuidelines_9-25-2018.pdf).

156. *Id.*

157. SANTA MONICA, CAL. MUN. CODE § 3.21.040 (2018), <http://www.qcode.us/codes/santamonica>.

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city and other cities; (2) the maximum number of shared devices anticipated during the pilot program, the plan for balancing shared mobility devices for citywide coverage, the plan for device maintenance, levels of staff for operations and administration, and the customer service plan; (3) applicant's regulatory compliance program; (4) safety programs; and (5) how the company planned to educate users.<sup>158</sup>

The Shared Mobility Operator Selection Committee then reviewed the applications based upon objective criteria, including: experience; proposed operations plan; financial characteristics and stability; adequacy of insurance; ability to begin operations in a timely manner; public education strategies; relevant record of the applicant's, or officer's, owner's, or principal's, violations of Federal, State, or local law, or rules and regulations; and any other objective criteria established by administrative regulation.<sup>159</sup> They then made written recommendations to the Director of Planning and Community Development.<sup>160</sup> The Director then set forth the reasons that support his or her final determination in the granting of four permits to the applicants.<sup>161</sup> The Director used the same evaluation criteria in reviewing the committee's recommendations, and, ultimately, his decision seemed to hinge on experience and ability to launch within the timeline proscribed, as the applicants had very similar scores in all other areas.<sup>162</sup> In the end, the Director awarded Bird and Lime with scooter permits and Lyft and Jump with bike permits.<sup>163</sup> These four companies had the most experience in their respective categories and were also able to fulfill the timeline.<sup>164</sup>

Seattle, which was the first major city to have dockless bikes on its streets, took the complete opposite approach with scooters by banning them in the fall of 2018.<sup>165</sup> These dockless service providers should be very attractive to Seattle officials considering a major highway was demolished on Jan-

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158. *Id.* § 3.21.050.

159. *Id.* § 3.21.060.

160. *Id.*

161. *Id.*

162. CITY OF SANTA MONICA DIRECTOR OF PLANNING AND COMMUNITY DEVELOPMENT, FINAL ADMINISTRATIVE DECISION: SHARED MOBILITY DEVICE PILOT PROGRAM OPERATOR SELECTION AND DEVICE ALLOCATION PURSUANT TO SANTA MONICA MUNICIPAL CODE ("SMMC") § 3.21 (Aug. 30, 2018), <https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Shared%20Mobility%20Device%20Pilot%20Program.pdf>.

163. *Id.*

164. *Id.*

165. David Gutman, *Seattle Embraced Dockless Bike Shares, but Bans Scooter Ones. How Come?*, SEATTLE TIMES (Sept. 30, 2018), <https://www.seattletimes.com/seattle-news/transportation/seattle-embraced-dockless-bike-shares-but-bans-scooter-ones-how-come>.

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uary 11, 2019.<sup>166</sup> In fact, Seattle Transportation Managers urged people to use the months before the closure to test out new transit routes, which seems like a perfect fit for dockless scooters and bikes.<sup>167</sup> Nevertheless, the Seattle Department of Transportation wrote to the dockless scooter providers in the spring of 2018, telling them that they could not do business in Seattle until the city set up a permit program, which would not take place until it had a permanent dockless bike program.<sup>168</sup> In fact, Seattle's Municipal Code prohibits scooters from being operated on sidewalks or in bicycle lanes.<sup>169</sup> The mayor seemed to have been spurned by the scooter-related emergency room visits that spiked in cities after the dockless scooters began operating across the country.<sup>170</sup> The mayor wished to monitor what other cities do before finding a permanent home for the dockless scooters in Seattle.<sup>171</sup>

### **B. Current Local Regulations for and Conflict with Ridesharing Providers**

Austin, Texas, a crowded city known to host large events popular with tourists such as Austin City Limits and South by Southwest, heavily relies on public transportation and ridesharing providers to ease traffic congestion within the city.<sup>172</sup> In 2015, Austin citizens voted for an ordinance that would require all transport network companies (like Uber and Lyft) to conduct fingerprint-based criminal background checks on individual drivers, despite more than \$8 million spent by Uber and Lyft to defeat the ordinance.<sup>173</sup> The ordinance did not go into effect until May 2016, but nevertheless, Uber and Lyft ceased operations in the city the morning following the vote.<sup>174</sup> However, the Texas State Legislature took matters into their own hands by amending the law and placing the regulatory power of transportation network companies into the exclusive jurisdiction of the state, not municipalities.<sup>175</sup>

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166. Mike Lindblom, *Permanent Closure of Alaskan Way Viaduct Delayed*, SEATTLE TIMES (Sept. 17, 2018), <https://www.seattletimes.com/seattle-news/transportation/permanent-closure-of-alaskan-way-viaduct-delayed-until-january>.

167. *Id.*

168. Gutman, *supra* note 165.

169. SEATTLE, WASH., MUN. CODE § 11.46.010(a) (2019), [https://library.municode.com/wa/seattle/codes/municipal\\_code](https://library.municode.com/wa/seattle/codes/municipal_code).

170. Gutman, *supra* note 165.

171. *Id.*

172. See Junfeng Jiao, *Better Planning and Expanded Bus Services Can Transform "Transit Deserts,"* UT NEWS (Nov. 10, 2017), <https://news.utexas.edu/2017/11/10/better-mass-transit-planning-can-transform-transit-deserts> (detailing Austin's traffic issues and analyzing possible solutions).

173. Kelly, *supra* note 54.

174. *See id.*

175. TEX. OCC. CODE ANN. § 2402.003 (West 2017).

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### C. National Association of City Transportation Officials Recommendations for Regulations on Smart Mobility

Because of the state law mentioned above, Texas cities cannot regulate ridesharing providers like Uber and Lyft; however, no current state law prohibits municipalities from regulating the dockless service providers like Lime and Bird. As noted above, cities have struggled with how they should be regulating these smart mobility platforms, with some engineering pilot programs and some downright banning them altogether.<sup>176</sup> NACTO is an association of sixty-three North American cities and ten transit agencies formed to exchange transportation ideas, insights, and practices to cooperatively approach national transportation issues.<sup>177</sup> Its mission is to build cities as places for people, with safe, sustainable, accessible, and equitable transportation choices that support a strong economy and vibrant quality of life.<sup>178</sup> NACTO recently took up the issue of smart mobility and, in July 2018, published guidelines for the regulation and management of shared active transportation that cities across the country can use in their efforts to regulate this new technology.<sup>179</sup>

NACTO guidelines provide direction for municipalities looking to manage and regulate what they deem “Shared Active Transportation” companies<sup>180</sup> that are not otherwise managed through other means like State law, competitive procurement processes, or contracts.<sup>181</sup> The guidelines are di-

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176. See, e.g., Wells Dunbar & Kristen Cabrera, *As Scooters Proliferate, How Are Cities Managing the Chaos?*, TEX. STANDARD (July 4, 2019), <https://www.texasstandard.org/stories/as-scooters-proliferate-how-are-cities-managing-the-chaos> (detailing how major Texas cities are dealing with scooters); Dan Solomon, *Frisco Flipped Bird Electric Scooters the Bird*, TEX. MONTHLY (Dec. 21, 2018), <https://www.texasmonthly.com/the-culture/frisco-flipped-bird-electric-scooters-bird> (detailing Frisco’s ban of Bird scooters); Claire Allbright, *A Flock of Electric Scooters Suddenly Descended on Austin. Now the City Is Scrambling to Regulate Them*, TEX. TRIBUNE (May 1, 2018), <https://www.texastribune.org/2018/05/01/flock-electric-scooters-suddenly-descended-austin-now-city-scrambling> (describing the trouble Austin lawmakers are having with regulating smart mobility platforms).

177. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, <https://nacto.org/about> (last visited Feb. 15, 2020).

178. *Id.*

179. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, GUIDELINES FOR THE REGULATION AND MANAGEMENT OF SHARED ACTIVE TRANSPORTATION (2018), <https://nacto.org/wp-content/uploads/2018/07/NACTO-Shared-Active-Transportation-Guidelines.pdf>.

180. *Id.* at 2 (defining “Shared Active Transport” as “a network or system of small vehicles, placed in the public right-of-way and for rent in short time increments, that provides increased mobility options over short distances in urban areas”).

181. *Id.* at 3.

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vided into several broad categories that include policy areas where cities should be in alignment and places where policy is handled best at the local level.<sup>182</sup> The guidelines also provide potential practices to address key issues, such as determining allowable fleet sizes, ensuring engagement and equity-focused programing, setting permit fees, and vehicle distribution.<sup>183</sup>

### **1. Authority of Cities to Manage and Regulate Shared Active Transportation Companies**

Initially, the guidelines addressed the authority of cities to manage and regulate the Shared Active Transportation companies.<sup>184</sup> Because it is a “fundamental responsibility of cities and public entities to ensure safe passage public right-of-way, to protect public health, safety and welfare, and govern commerce in the public right-of-way and on private property,” cities have the authority to manage and regulate activity and commerce like Shared Active Transportation companies in the public streets.<sup>185</sup> Choosing to regulate these companies is a decision best handled by the local cities.<sup>186</sup> Some may find that allowing the companies to manage themselves supports city goals, while others may find that the companies detract from local policy goals and should be limited or banned from operating.<sup>187</sup> When and where governments choose to exercise their authority varies by city, but the mechanisms for how and why they can regulate generally fall into the same categories.<sup>188</sup>

Typically, the smaller vehicles provided by the companies are considered commercial equipment, and in most cities, businesses cannot operate in the public right-of-way without an appropriate permit.<sup>189</sup> Thus, despite the fact that the payment for the commercial equipment takes place on an app, the transaction takes place in the public right-of-way and the city can regulate it like it does with other commerce in the public right-of-way.<sup>190</sup> Further, local zoning laws may designate what kinds of business are permitted in certain areas of the city.<sup>191</sup> “For example, in at least one community, public bike share is explicitly defined and permitted in the zoning code, but private

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182. *Id.*

183. *Id.*

184. *Id.* at 4.

185. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179.

186. *Id.*

187. *Id.*

188. *Id.* at 5.

189. *Id.*

190. *Id.*

191. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 5.

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bike share is not [and thus] renting out bikes is not permitted on private property because it is not an allowed use under zoning.”<sup>192</sup>

Additionally, managing how smaller vehicles like bikes and scooters are placed and operated on the public rights-of-way falls under the cities’ policing power on health and safety.<sup>193</sup> Thus, the city could regulate the placement and operation of these smaller vehicles in the name of safety towards other citizens, especially those that are protected under the ADA.<sup>194</sup> Lastly, cities with existing contracts with vendors to operate local bikeshare systems may have exclusivity which would limit the cities’ ability to permit other vendors to operate or do business within certain areas of the city.<sup>195</sup> In these situations, the specific language of the contract would govern how much control the city has over allowing new companies to operate similar programs.<sup>196</sup> Further, these contracts may not even apply to smaller vehicles such as scooters, and thus, the city could allow other vendors to operate different equipment without violating their contract with the previous vendor.<sup>197</sup>

## 2. Policy Areas Where All Cities Should be in Alignment

NACTO provides many suggestions for how all cities should regulate Shared Active Transportation companies when it comes to three major policy areas, including oversight and authority, data standards, and small vehicle standards for the shared-use context.<sup>198</sup> Generally, NACTO suggests that cities should only allow operation in the public right-of-way with legal permission (e.g. license, permit, or contract) from the city as well as retain the right to limit how the number of providers and designate where they can operate.<sup>199</sup> Further, NACTO suggests that cities limit the duration of licenses and permits to fixed periods of time and charge fees for operating that reflect the cost of regulating, overseeing, and managing the companies.<sup>200</sup> Lastly, cities should require companies to hold insurance on their equipment and to indemnify the city in the event of an accident.<sup>201</sup>

In overseeing the operations of Shared Active Transportation companies, NACTO suggests that cities require companies to remove vehicles that are damaged, abandoned, and/or improperly placed within specific time

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192. *Id.*

193. *Id.*

194. *See id.*

195. *Id.*

196. *Id.*

197. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 5.

198. *Id.* at 6.

199. *Id.* at 7.

200. *Id.*

201. *Id.*



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frames and assess penalties for failure to do so.<sup>202</sup> Further, companies should come to an agreement with the city on procedures and protocols for operation during specific events like bad weather and natural disasters, emergencies, special events, and city maintenance schedules.<sup>203</sup> In a public communication context, cities should require the companies to have a city-specific customer service line in which citizens and the city can contact about questions and/or needed maintenance of equipment.<sup>204</sup> Additionally, companies should maintain city-specific websites and social media accounts that, among other city-specific needs, explains terms of service, user instructions, privacy policies, fees/costs, and penalties.<sup>205</sup>

Looking towards data standards, NACTO suggests that cities require companies to “provide them with accurate, complete, and timely data about how Shared Active Transportation services are used” and who is riding them.<sup>206</sup> This data can be very useful to cities in their evaluation of where to limit operation as well as areas that may require more access to transportation. Cities can then use this information to select companies that have the best plan to meet the cities’ transportation needs or direct current operators to alter their services to meet these needs. NACTO further suggests that the city require companies to maintain GPS equipment affixed to the equipment and to ping this GPS equipment every ninety seconds in order to ensure that the equipment’s location is known, even when it is not in use.<sup>207</sup> Additionally, NACTO provides guidelines on how cities can help to protect data privacy of its citizens that use the Shared Active Transportation equipment.<sup>208</sup> They suggest that companies provide the city with a clear, written justification for why they need access to each type of customer data and agree to not provide this data with third parties.<sup>209</sup> Further, customers should not be required to provide access to certain data like contacts, camera, photos, etc., and companies should provide the customers with clear, prominent notification about what data will be accessed.<sup>210</sup>

The last area that NACTO suggests all cities should be in alignment on is the small vehicles standards for the shared-use context.<sup>211</sup> Cities should require that the Shared Active Transportation companies provide small vehi-

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202. *Id.*

203. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 7.

204. *Id.*

205. *Id.*

206. *Id.* at 8.

207. *Id.*

208. *Id.* at 8–9.

209. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 8–9.

210. *Id.* at 9.

211. *Id.*

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cles (i.e. bikes and scooters) that are safe for public use and developed specifically for the shared-use context.<sup>212</sup> All small vehicles should comply with safety standards established by the Consumer Protection Safety Commission as well as any other federal, state, or city standards.<sup>213</sup> Further, the city should limit the maximum motor-assist speed of these vehicles to fifteen miles per hour, and their front and back lights should always be on.<sup>214</sup> Additionally, the vehicles should have permanent identification numbers that allow the companies to maintain them as well as remotely lock them in the event that they become damaged and/or unsafe for use.<sup>215</sup>

### 3. Policy Areas Best Evaluated at the Local Level

NACTO suggests that the two areas that should be handled at the local level are small vehicle parking and community engagement and equity programs.<sup>216</sup> Despite the “dockless” nature of the equipment, allowing the equipment to be left on public property requires cities to designate places where the small vehicles can be parked to best serve the needs of the citizens.<sup>217</sup> Currently, limitations in GPS and “geo-fencing”<sup>218</sup> technology means that there is not a comprehensive and remote way to enforce small vehicle locations, so most cities rely on reported problems and spot checks to assess compliance with regulations.<sup>219</sup> NACTO lays out three ways cities can manage the locking options of small vehicles.<sup>220</sup> One is an “unrestricted” option in which small vehicles can be left anywhere that does not block ADA-required sidewalk space.<sup>221</sup> While this is simple and “makes point to point trips easier,” it can easily lead to blocked sidewalks, driveways, and crosswalks.<sup>222</sup> The second is “encouraged placement,” where “small vehicles can be left most places with some limitations that depend on geographical areas.”<sup>223</sup> The third option is “lock-to” regulations where small vehicles are required to be

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212. *Id.*

213. *Id.*

214. *Id.*

215. NAT'L ASS'N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 9.

216. *Id.* at 10.

217. *Id.* at 11.

218. “Geo-fencing (geofencing) is a feature in a software program that uses the global positioning system (GPS) or radio frequency identification (RFID) to define geographical boundaries.” Margaret Rouse, *Geo-fencing (Geofencing)*, WHATIS (Dec. 21, 2016), <https://whatis.techtarget.com/definition/geofencing>.

219. NAT'L ASS'N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 11.

220. *Id.*

221. *Id.*

222. *Id.*

223. *Id.* at 12.

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locked to a fixed object.<sup>224</sup> This option is orderly and does not block pedestrian access but limits parking opportunities.<sup>225</sup>

NACTO also provides guidance for where cities, depending on local needs, require the small vehicles to be parked, namely in the street or on the sidewalk.<sup>226</sup> By requiring the small vehicles to be parked in the street, the city is keeping the equipment away from pedestrian areas, thus protecting those with ADA disabilities.<sup>227</sup> However, the city “may [receive] pushback on actual or perceived removal of parking.”<sup>228</sup> On the other hand, requiring the small vehicles to be parked on the sidewalks can be useful as people are already used to racks on sidewalks, but may impede pedestrian and ADA access if improperly placed or knocked over by pedestrians or weather.<sup>229</sup> NACTO also suggests several ways a city can denote the correct parking place of small vehicle, including painted boxes, street corrals, signed sidewalk racks, and geo-fencing.<sup>230</sup>

The other area NACTO suggests is best handled at a local level is the community engagement and equity programs employed by the Smart Active Transportation companies.<sup>231</sup> By requiring companies to participate in public engagement and provide pricing options that address the needs of low-income residents, the city ensures that the companies provide real transportation options to all residents.<sup>232</sup> In contract-based systems and those developed through competitive procurement processes, engagement programing can be achieved through contract language or agreements within a robust public-private partnership.<sup>233</sup> “In permit or license-based systems, milestones and incentives can be an effective mechanism” for ensuring public engagement.<sup>234</sup>

NACTO highlights two ways the companies can engage in the community: discount programs and engagement programs.<sup>235</sup> Discount programs designed to reduce costs for low-income individuals can help to ensure transportation access to all residents.<sup>236</sup> Further, some cities even imple-

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224. *Id.*

225. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 12.

226. *Id.* at 13–14.

227. *Id.* at 13.

228. *Id.*

229. *Id.* at 14.

230. *Id.* at 15–18.

231. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 19.

232. *Id.*

233. *Id.*

234. *Id.*

235. *Id.* at 19–20.

236. *Id.* at 19.

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mented “cash-payment options to address disparities in credit card access.”<sup>237</sup> Additionally, NACTO suggests that, as new mobility options emerge, cities should require the companies to engage with the community and make education regarding the new services available to the public.<sup>238</sup> This can be done by attending public events and meetings, providing education classes, and partnering with job-training programs.<sup>239</sup>

#### D. The Need for Local Regulation of Smart Mobility

Smart mobility and Shared Active Transportation services are best regulated at the local municipality/city level rather than at the larger State or Federal levels.<sup>240</sup> Each municipality is unique and has different public transit systems that serve different needs for mobility.<sup>241</sup> Thus, the city is best equipped to evaluate its mobility needs and implement regulations on smart mobility platforms<sup>242</sup>

Population density is a major aspect of cities that can vary largely despite having a similar total population because dense cities are becoming denser and sprawling cities are spreading out further.<sup>243</sup> In Seattle, for example, the “average neighborhood density was three percent higher in 2016 than in 2010.”<sup>244</sup> But in San Antonio and Austin, “average neighborhood density fell by five percent between 2010 and 2016.”<sup>245</sup> These spread out cities are showing faster overall population growth than urbanizing denser cities, so while urban areas are faster growing than rural areas, the suburban areas are faster growing than metro urban areas.<sup>246</sup>

These population densities can have major effects on smart mobility companies. Lime, which offers both dockless bikes and scooters, markets

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237. NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 20.

238. *Id.*

239. *Id.*

240. *Id.* at 4.

241. *See id.* at 21; *see also* Skip Descant, *Report: Public Transit Must Become a City’s Mobility Backbone*, GOVTECH (Jan. 10, 2019), <https://www.govtech.com/fs/transportation/Report-Public-Transit-Must-Become-a-Citys-Mobility-Backbone.html>.

242. *See* Descant, *supra* note 241.

243. Jed Kolko, *Seattle Climbs but Austin Sprawls: The Myth of the Return to Cities*, N.Y. TIMES (May 22, 2017), <https://www.nytimes.com/2017/05/22/upshot/seatle-climbs-but-austin-sprawls-the-myth-of-the-return-to-cities.html>.

244. *Id.*

245. *Id.*

246. *Id.*

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itself as an alternative mode of mobility for short distance transportation.<sup>247</sup> Certainly, a consumer would not take a lime scooter from a suburban area to the center of a downtown area that is fifteen or more miles away.<sup>248</sup> In an instance like this, dockless equipment is not the best form of transportation for the city to invest in. Rather, it may be wiser to develop a more traditional form of transit, like a bus or rail service, that could take citizens from the suburbs into the metropolitan area.<sup>249</sup> Car-sharing and ride-sharing services are also better in these instances since they are more equipped to go longer distances while still retaining the benefits of smart mobility like “on-demand,” “budget-friendly” modes of transportation.<sup>250</sup>

Further, the denser a city is, the more regulations it should require on the placement and parking of equipment. “New York [City] has the highest population density of any major city in the United States with over 27,000 people per square mile.”<sup>251</sup> With this population density, the city should strictly regulate where smart mobility services, like dockless equipment, can be parked as it could easily crowd busy sidewalks and city streets and cause major safety concerns. On the other hand, “Dallas has a population density of 3,645 [people] per square mile,” making it a less packed city in comparison to New York.<sup>252</sup> Thus, because the population is less dense, the parking of dockless equipment should not be as large of a concern as it would be in a denser city.

Nevertheless, Dallas has struggled with smart mobility companies that provide dockless equipment like scooters and bikes.<sup>253</sup> In January 2018, the Dallas City Manager wrote a letter to Lime, Ofo, Spin, VBikes, and MoBike to relocate all bikes violating a new set of rules established in response to

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247. *About Us*, LIME, <https://www.li.me/about-us> (last visited Feb. 15, 2020); *How to Lime Safely*, LIME, <https://www.li.me/how-to-lime> (last visited Feb. 15, 2020).

248. *See Electric Scooter Sharing*, LIME, <https://www.li.me/electric-scooter#faqs> (last visited Feb. 15, 2020).

249. *See* Andy Furillo, *How to Bring Transportation Freedom to the Suburbs*, MOBILITY LAB (June 21, 2018), <https://mobilitylab.org/2018/06/21/how-to-bring-transportation-freedom-to-the-suburbs>.

250. *See Why Ride with Uber*, UBER, <https://www.uber.com/us/en/ride/> (last visited Feb. 15, 2020).

251. *Population Facts*, NYC, <https://www1.nyc.gov/site/planning/data-maps/nyc-population/population-facts.page> (last visited Feb. 15, 2020).

252. *Dallas Population*, WORLD POPULATION REV., <http://worldpopulationreview.com/us-cities/dallas-population> (last visited Feb. 15, 2020).

253. *See* Stephen Young, *Dallas City Manager Tells Bike-Share Companies to Clean Up after Themselves*, DALL. OBSERVER (Jan. 19, 2018), <https://www.dallasobserver.com/news/dallas-bike-share-ultimatum-clean-up-bike-litter-or-the-city-will-10278430>.

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poor placement of bikes on public property.<sup>254</sup> On June 26, 2018, the Dallas City Council amended Chapter 43, “Streets and Sidewalks,” of the Dallas City Code by adding a new article X, entitled “Dockless Vehicle Permit.”<sup>255</sup> This ordinance provided that a permit is required to operate a dockless vehicle service in the city, establishing fees and providing regulations for the dockless vehicle permit programs.<sup>256</sup>

The Dallas ordinance is similar in some aspects to the NACTO guidelines, despite being enacted before the guidelines were published.<sup>257</sup> The ordinance establishes a permit system that reserves to the “director” the power to refuse and issue/renew a permit as well as suspend or revoke previously issued permits.<sup>258</sup> Further, the ordinance requires the companies to maintain the equipment in “good riding condition” with equipped GPS technology and provide a twenty-four-hour customer service number for citizens to utilize.<sup>259</sup> In regards to parking and placement, the city provides the companies with a long list of restrictions specific to the Dallas metro area.<sup>260</sup> Additionally, the ordinance requires companies to procure and maintain insurance, as well as provide the Director with data they can use in the collection and analysis of operations.<sup>261</sup>

The ordinance lacks several aspects discussed by NACTO, namely data privacy protections for consumers and community engagement requirements.<sup>262</sup> Dallas should amend its ordinance to add regulations on the consumer data acquired by the companies, such as name, birthdates, addresses, credit card information as part of their operations. In doing so, Dallas can require companies to provide clear indications of why they need access to the data they acquire, as well as not share the data with third parties.

Further, Dallas should require the companies seeking permits to lay out plans on how they will engage with the community, much like San Francisco does.<sup>263</sup> This can help Dallas ensure that the companies are meeting the mo-

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254. Namely, the bikes could not be “on sidewalks narrower than 10 feet in width, on turf, landscaping or other unimproved surfaces, blocking access to public or private property and transit stops (including bus and rail transit), blocking sidewalk curb ramps, [and/or] on multi-use trails to their respective trailheads.” *Id.*

255. DALL., TEX., ORDINANCE 30936 (June 26, 2018).

256. *Id.*

257. *See id.*; *see also* NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 1.

258. *See* DALLAS, TEX., CITY CODE ch. 43, art. X, § 43-160–65 (2018).

259. *Id.* at § 43-168(f) & (j).

260. *Id.* at § 43-169.

261. *Id.* at § 43-170–71.

262. *See* DALL., TEX., ORDINANCE 30936 (June 26, 2018); *see also* NAT’L ASS’N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 1.

263. *See* Marshall, *supra* note 149.

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bility needs of the residents and at the same time participating in public engagement efforts. For example, Dallas has a large homeless population.<sup>264</sup> In January 2018, 4,140 homeless were counted in Dallas and Collin counties, an increase of nine percent from the previous year.<sup>265</sup> In assessing smart mobility companies' plans for community engagement, Dallas can encourage them to address problems that can lead to homelessness by engaging in job creation, discounted fares, donating to food and clothing banks, etc.<sup>266</sup> These additions would put the ordinance more in line with NACTO guidelines and make sure the city is getting the most for its citizens out of the smart mobility platforms.<sup>267</sup>

## V. CONCLUSION

Smart mobility is a new technology that has promising applications in making public transit more efficient and environmentally friendly. Although it is relatively new, cities have stepped up and implemented well thought and effective regulations to make sure new smart mobility platforms like doockless scooters and bikes are safe and available for everyone. As this technology continues to develop, governments need to be ready to handle the new smart mobility platforms that pose new challenges to current law.

For example, driverless cars are already being implemented in several cities by large companies like Uber and Google.<sup>268</sup> As driverless cars become more commonplace, there will be a need for infrastructure changes to handle autonomous computer-driven cars.<sup>269</sup> Further, because the autonomous cars are likely to be programmed to not break traffic laws, there will be a decrease in police traffic stops that result in discovery of a large crime like drug trafficking.<sup>270</sup> Thus, a change in the ability of police officers to monitor and search autonomous cars will be required to ensure enforcement of criminal laws while still maintaining constitutional protections against improper search and seizures.<sup>271</sup> Additionally, driverless cars will need protection from hackers who wish to interfere with the operation of the car or acquire user

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264. See Alex Macon, *Annual Count Shows Increase in Dallas Homelessness*, D MAG. (Mar. 22, 2018), <https://www.dmagazine.com/frontburner/2018/03/dallas-homeless-count/>.

265. *Id.*

266. See NAT'L ASS'N OF CITY TRANSP. OFFICIALS, *supra* note 179, at 19–20.

267. *Id.*

268. Alison Griswold, *Alphabet is Coming for Uber*, QUARTZ (Dec. 6, 2018), <https://qz.com/1486469/waymo-googl-is-coming-for-uber-with-a-driverless-taxi-service>.

269. See Crane, *supra* note 60, at 100.

270. *Id.* at 106.

271. See *id.* at 106–7.

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data.<sup>272</sup> While some states have passed regulations for driverless cars, additional laws and regulations are “needed to address safety, liability, cybersecurity, and privacy concerns” in regards to driverless cars.<sup>273</sup>

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272. Chasel Lee, Note, *Grabbing the Wheel Early: Moving Forward on Cybersecurity and Privacy Protections for Driverless Cars*, 69 *FED. COMM. L.J.* 25, 32 (2017).

273. *Id.* at 34.