Abstract

Policymakers face a challenging dilemma when responding to novel technologies. Specifically, evolving iterations of the platform economy like short-term home rentals and ridesharing have quickly upended municipal policy regimes and required creative solutions from city leaders. This dissertation builds upon existing frameworks for how policymakers respond to innovations by considering the arrival and subsequent policy response to a recent iteration of the platform economy, shared electric scooters (e-scooters). Specifically, this research considers the cases of five cities in Los Angeles County (Santa Monica, Culver City, Beverly Hills, Los Angeles, and West Hollywood) and how each city’s government responded to shared e-scooters. This research then synthesizes those findings into a set of considerations for cities when responding to future innovations, which serve as an extension of previous frameworks with a focus on the specific policy environment and constraints facing city leaders. Specifically, the case studies in this research emphasize the challenge of making policy for innovations that deploy, scale, and evolve quickly. This research not only emphasizes the importance of flexible, nimble policy mechanisms capable of responding to shifting markets, but also the critical importance of individual actors at the local level to set and implement policy. Lastly, these cases also demonstrate the importance and effectiveness of collaboration and coordination between city governments as a critical tactic for managing innovation.
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Acknowledgements

Thank you to everyone at PRGS who supported my efforts as a mentor or peer. Thank you to my committee, Matthew Lewis, Sandra Evans, Dave Baiocchi, and my outside reader, Michael Dardia. Thank you to my peers for your encouragement and camaraderie, including Russ Williams, Moon Kim, Noah Johnson, Alejandro Becerra, John Speed Meyers, Hank Waggy, Max Griswold, the entirety of Team Wavestorm, and many others.

Thank you to my family, especially my parents and grandparents, for instilling me with the curiosity to wonder how the world works, the discipline to finish big tasks, and the humility to not take myself too seriously in the process.

Most of all, thank you to Chelsea, my wife and life partner. Your constant encouragement and support made this effort possible.
Abbreviations

**AB** – Assembly Bill

**CD** – Los Angeles City Council District

**CFA** – Call for Application

**CM** – Los Angeles City Councilmember

**E-Scooters** – Shared Electric Scooters

**LADOT** – Los Angeles Department of Transit

**MDS** – Mobility Data Specification

**Metro** – Los Angeles County Metropolitan Transportation Authority

**GBFS** – General Bikeshare Feed Specification

**TNC’s** – Transportation Network Companies
1. Introduction

Summary

Policymakers face a challenging dilemma when responding to emerging technologies. By the time an innovation’s societal impact is fully understood, it is often too late to act. While this problem exists at every level of government, it is a special concern for cities, where evolving waves of technologies are launched with the promise of improving urban life. In recent years, cities have faced the prominent challenge of responding to platform technologies, such as ridesharing and short-term home rentals. City leaders must not only navigate complex policy tradeoffs when deciding how to respond to new technologies, but also often do so with limited resources and an asymmetry of power as they are only one of a company’s many markets.

This research contributes to the field of understanding how municipalities respond to platform technologies by conducting comparative case studies of how five cities located in Los Angeles County (Los Angeles, Santa Monica, Culver City, Beverly Hills, and West Hollywood) responded to the arrival of shared electric scooters (e-scooters) which began in late 2017. Through a combination of expert interviews and the use of archival city council proceedings and documents, this research documents how each city encountered this novel technology, identifies which aspects raised concerns, and explores how each city crafted policies in response.

This research builds upon existing literature analyzing policy responses to innovation, specifically by extending the framework proposed by Biber et al. in 2017 (the Biber Framework). First, this research classifies each city’s actions according to the Biber Framework’s categories of policy disruption and response. The findings from each city are then synthesized into a set of lessons and considerations city leaders can use when responding to future innovations. These lessons and considerations serve as an extension of the Biber Framework that accounts for the specific policy environment and constraints facing city leaders.

E-scooters will not be the last innovation to test the limits of existing urban policy. Above all, this research aims to equip city policymakers and scholars with an understanding of what made responding to e-scooters so challenging and what steps cities can take to respond to future technologies. Specifically, the case studies in this research emphasize the challenge of making policy for innovations that deploy, scale, and evolve quickly. In response, city leaders must identify strategies to design flexible policy mechanisms capable of responding to shifting markets. These case studies also affirm the importance of individual actors at the local level, from idiosyncratic council members whose personal preferences motivated city policies to ambitious city staffers willing to design and implement novel policy programs. Lastly, these cases also demonstrate the importance and effectiveness of collaboration and coordination between city governments as a critical tactic for managing innovation.

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Organization and Core Research Questions

This dissertation contains 11 chapters. The present provides a summary of the research along with the core research questions. The second provides background on the challenge of regulating innovation, the platform economy in cities, and the emergence of shared micromobility and e-scooters. The third outlines this research’s methodological approach, including data sources and analytical techniques. The fourth provides an overview of the case studies, and the fifth through ninth chapter contain the detailed account of what happened in each case study, their policy framing and response within the Biber framework, and takeaways from each city. The tenth chapter offers a summary and comparative analysis of the case studies, a synthesis of what made e-scooters a concern, and considerations for both cities and companies looking forward. The eleventh and final chapter considers the legacy of the launch of e-scooters and lines of inquiry for future research.

Below are the five core research questions guiding this research followed by the chapter where each question is addressed:

**RQ #1:** What theories and frameworks exist that help cities understand and respond to innovative products and services from platform technology companies? (Chapter 3)

**RQ #2:** What are the key observable events marking the arrival of the e-scooter industry in Southern California? (Chapters 4-9)

**RQ #3:** How did cities create policies in response to the arrival of e-scooters? (Chapters 4-9)

**RQ #4:** What features caused e-scooters to become a concern for the case study cities? (Chapter 10)

**RQ #5:** What insights from the deployment and response to e-scooters can help improve existing frameworks and guide how cities respond to future innovations? (Chapter 10)
2. Background

The Challenge of Making Policy for Innovation

The fundamental dilemma at the heart of this research is assessing how government ought to respond to innovation. Policymaking can be difficult under any circumstances. It is even more difficult when the subject of policy is a novel phenomenon with unclear implications, as is the case with innovative activity. The appropriate aim, behavior, and function of government in the face of novel behaviors spans a vast literature beyond public policy, economics, legal scholarship, and ethics that considers foundational questions of the nature of governance and technology.

Given the sheer volume of literature on governing innovation and the broader debates of ‘creative destruction’, this research directly specifies and engages with a subset of more recent literature. A source of helpful clarification is Butenko and Larouche’s summary of legal thinking as they attempt to synthesize two major streams of scholarship: law and economics, and law and technology. Law and economics is characterized as focusing on policymaking with the intention to promote innovation, or regulation for innovation. In this stream, innovation is typically presumed to be inherently good, the key to economic growth and improved human well-being. The other stream, law and technology, focuses on the regulation of innovation. In this framing technology is considered exogenous to the policy process and capable of producing both harms and benefits for society. Clearly, the division between both camps can be blurred, as policymakers must simultaneously cultivate innovative activities while mitigating negative externalities. While questions in this dissertation’s research spans both perspectives, it is primarily concerned with appropriate regulation of innovation, meriting a deeper look at law and technology scholarship.

Within the law and technology stream, there is ongoing debate about how effective the broader policymaking process is at responding to innovation. One popular concern is that technological innovation is rendering regulator’s traditional methods of making policy useless. A common frame is one of mismatched speed, suggesting that an accelerating rate of technological development moves too quickly for lagging regulatory responses. These arguments focus on a perceived growing gap between the speed of technological change and the slow process of formulating regulatory guidance for technology. This model of thinking is best summed up in ‘The Pacing Problem’, which argues stagnant public sector bureaucracies marked by inefficiency

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2 Debates over the appropriate role of policy and innovation can be traced to foundational economic and policy texts, all of which have inspired substantial ongoing debate. The canonical launching starting point for ‘creative destruction’ is Joseph A Schumpeter, Capitalism, Socialism, and Democracy, 1942.


continue to lag private sector technological developments. The common anxiety of this literature is a shared sense that existing policymaking is ill-equipped for a future that appears to be evolving at an ever-increasing rate.

A related, though distinct, concern is focused not on the speed of technology, but the epistemological limits in knowing technologies’ eventual impact on society. One popular articulation is ‘the Collingridge Dilemma’ which describes an inherent tradeoff between understanding a technology and controlling its outcome. The dilemma describes a murky choice facing decisionmakers when responding to an innovation. Either a technology can be controlled in its infancy, but at that point the extent of a technology’s impact is poorly understood and any attempt to control it might misdiagnose the problem or eliminate any potential societal benefit. Alternatively, decisionmakers can wait until a technology’s implications become clear, however by that point the technology will be widely adopted, established, and much more difficult to shape. One relevant recent example is the regulatory debate surrounding social media, which has transformed from a promising and benign novelty into a trillion-dollar global industry used by over half the globe in under two decades. The challenge for policymakers is to wait long enough to identify the problem in need of solving while also acting early enough to enact a meaningful intervention. However, as noted by Wallach, this window of opportunity continues to shrink as the rate of technological change increases.

Among scholars who worry about quickening technological advancement, a common focus is to devise tactics to help policymakers navigate uncertain futures, typically by proposing more flexible policymaking. This includes calls for ‘soft law’ governance marked by less formal interaction with regulators to try and communicate expectations with less-binding techniques. The move from hard and fast regulations to evolving governance norms is seen as a process better able to mitigate a technologies’ critical risks without stunting the development of potential benefits. Specific tactics emblematic of this approach include regulatory ‘sandboxes’ for policy experimentation with reduced liability, dynamic regulations attaching contingent outcomes to whichever future state emerges, or a principles-based approach focused on generating input from key stakeholders. While endless variations on these themes continue to emerge, the core

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10 Kaal, “Dynamic Regulation for Innovation.”
focus is finding ways to design policy in a manner that is responsive, collaborative, and capable of adapting to a novel technology.

At this point it is important to clarify between various terms used to describe various elements of the policymaking process. ‘Laws’ and ‘regulations’ are often lumped together as less flexible policy actions that are explicitly defined actions composed with a clear distinction between the authoring authoritative bodies of the regulation and the subject being regulated. Terms like ‘governance’ are meant to include a broader set of actions between public and private actors, including formal and informal communication, norms, and expectations. Many of the cited law and technology scholars perceive an over-reliance on laws and regulations, which are slow to be created and difficult to change and advocate for ‘soft law’ and greater reliance on governance. Usage of these terms is not consistent, and it is not worth unraveling definitional debates. However, the broad difference between explicit regulations and broader governance functions are worth knowing, as the latter is often seen as a means of better managing uncertain technologies.

Not all scholars accept the premises of needing to radically shift regulation in response to technology. One notable response comes from Lyria Bennett Moses, who rejects the framing of technology regulation as an overly narrow and poorly defined field of study. Specifically, she notes how studies operating under that framework define technology as a fluctuating set of whichever ideas are in vogue among the intelligentsia. This framing leads scholars to ignore existing policies and presume a need for technology-specific interventions created in response to an innovation. Instead, she calls for a framing rooted in a continuous and evolving socio-technological environment that accounts for existing laws and the wide range of stakeholders capable of shaping a technology’s use. Instead of becoming preoccupied with a technology as a novel and dire dilemma, it is simply the next chapter in an ongoing set of policy changes meant to update existing law with developing practice. This latter framing is rooted in Brownsword’s depiction of ‘regulatory connection’, an ongoing process of reconciling existing legal norms with emerging behavior driven as much by new technologies as the social norms evolving around their use. The question facing policymakers thus shifts from attempting to respond to technology writ large and instead focus on identifying the specific limits of existing laws.

A fundamental question then emerges: under what circumstances does the law require changing, and if so, what type of change is required? An answer can be found from Biber et al. in their analysis of policy responses to business disruptions. While the Biber framework will be detailed later in Chapter 3, it is worth mentioning because it pairs well with Bennett Moses’s work as both arguments attempt to pull back from fixations on novelty in pursuit of a more generalizable understanding of how the law adapts. Biber et al. begin with a longer historical lens, focusing on how business models are constantly being reinvented and then focus on defining the specific circumstances (termed ‘policy disruptions’) that require a change in policy. Like Bennet Moses, Biber et al. emphasize that regulators do not need to fixate on technological

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15 Biber et al., “Regulating Business Innovation as Policy Disruption.”
disruption, but instead should soberly identify the limits of existing laws and continuously adapt as needed.

This brief tour through the literature on making policy for innovation reveals a hotly debated topic, particularly within the legal realm, of how policy ought to account for technology. This debate provides helpful conceptual framing of the challenge of integrating novel technologies into existing legal regimes and proposes a range of strategies for overcoming uncertainty through flexible governance. But as the critical views of Bennett Moses and Biber et al. showed, much can be lost by focusing on ‘innovation’ writ large instead of examining the specific limits of existing policy in the face of a new technology or business practice. With those questions in mind, the next section will define and examine the unique qualities of the platform economy and the challenges it has posed for municipal leaders in recent decades.

Defining the Platform Economy and the Challenge for Cities

There is no firm definition over what qualifies as a platform technology. Indeed, even delineating boundaries between the overlapping sharing economy, digital platforms, and the gig economy is not always clear. While all three terms merit consideration, the earliest and arguably most foundational of the three worth exploring is the sharing economy, which established the optimistic vision of novel platforms generating public good and new ways of living.

A useful starting place for the sharing economy is Codagnone’s and Martens’ widely-cited attempt to scope the field on behalf of European regulators. While there is no single definition, they emphasize Schor’s inclusion of economic activities involving the ‘recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets’ that has greatly been accelerated by the use of digital platforms. “Debating the Sharing Economy,” 2014. This broad notion can then be divided into various ‘sharing’ activities along two dimensional axes, where the x-axis is ‘for-profit’ vs. ‘not-for-profit’ and the y-axis is ‘peer-to-peer’ vs. ‘business-to-consumer’ (shown in Figure 1). While Codagnone and Marten’s phrasing is used in the following discussion, it is important to note that these axes did not originate with them and were previously used by Schor and others for analyzing the sharing economy.

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17 Proof of the early importance of the ‘sharing economy’ can be found in a summary of google search terms, where it appeared more frequently than ‘gig economy’ and ‘digital platform’ until 2017. https://trends.google.com/trends/explore?date=2015-01-01%202020-01-01&query=%22sharing%20economy%22,%22digital%20platform%22,%22gig%20economy%22

18 Codagnone and Martens, “Scoping the Sharing Economy.”


Figure 1: Subsets of the ‘Sharing Economy’

In this diagram Quadrant 1 encompasses the true ‘sharing’ activities of distributing assets among peers without any profit motive, such as a neighborhood cooperative for sharing gardening tools. Quadrant 3 is empty since there are no businesses catering to consumers that are not-for-profit. Quadrant 4 is commercially owned assets being shared among users for profit, an example would be a business like Zipcar that owns a fleet of vehicles users can access through a digital app. Finally, Quadrant 2, for-profit platforms coordinating the sharing of assets among peers, is the most significant and contains companies like Uber and Airbnb. Codagnone and Marten argue the bulk of regulatory scrutiny and future research should be focused on Quadrant 2’s commercial peer-to-peer activities, which they consider to be the area of greatest impact and novelty.

Before focusing on the commercial peer-to-peer activities of Quadrant 2, it is important to note the significance of the ‘true sharing’ activities of Quadrant 1. Looking back, sharing without commercial motive represents a minor sliver of the larger sharing economy and is of little concern for policymakers. But the ethos and framing of peer-to-peer sharing, both with and without profit motives, played a major role in early perception of the field. Internet-enabled sharing was seen by many as a shift into an economy marked by collaborative consumption.\(^\text{21}\) where access to assets would uproot the traditional model of private ownership. The core idea was that if the internet allows people to share existing assets among one another (whether cars, homes, tools, etc.), then households will rely less on purchasing their own goods. Bolder interpretations considered digital sharing the catalyst for a broader cultural turn towards enhanced societal cooperation.\(^\text{22}\) For any group drawn towards co-ops and social structures defined by sharing, digital platforms appeared to be the tool for achieving previously unthinkable administrative scale and broader appeal. While radical visions of an altruistic, digital sharing...

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\(^{22}\) Volker Ralf Grassmuck, “The Sharing Turn: Why We Are Generally Nice and Have a Good Chance to Cooperate Our Way out of the Mess We Have Gotten Ourselves Into,” 2012.
world have yet to materialize, the original vision provides important context, as advocates of for-profit platforms frequently lean on the terms and ideals of this earlier notion. Many enthusiasts of the original vision expressed dismay at how the sharing economy movement became dominated by large-scale private platforms and argue the sharing terminology is abused by companies trying to enhance their public appeal.  

While much more discussion exists on the origins and legacy of the sharing economy outside the scope of this research, it serves as a foundation for the platform economy that we know today.

The use of the term ‘platform economy’ was created as a more neutral definition that focused on the impact of the digital platform at the center of these new activities while escaping the normative assumptions carried by terms like ‘sharing’. While definitions vary, use of the term ‘platform economy’ commonly focuses on peer-to-peer exchanges, where companies oversee two-sided digital marketplaces connecting supply and demand between individual participants. These platforms can be further divided based on what is being exchanged in the marketplace, where labor platforms (i.e. the ‘gig economy’) are used to hire workers for discrete tasks and capital platforms are used to sell goods or rent assets. Examples of digital labor platform services includes on-demand hiring for ridesharing, dog-walking, or furniture assembly, while capital platforms include the short-term use of assets like a home or a car. While use of the terms ‘sharing’ and ‘platform’ are continually muddled in the literature, moving forward this research will use the term ‘platform economy’ to include the ranging commercial activities facilitated by digital platforms. This includes peer-to-peer exchanges as well as examples where the platform company owns the assets used on the platform (i.e., Quadrants 2 and 4 of Codagnone and Martens’ chart).

**Policy Challenges Posed by the Platform Economy**

Various manifestations of the platform economy blur or subvert existing legal categories and have broken many of the assumptions undergirding policy regimes. The clearest case is the way digital platforms allow private goods to be used for commercial activity. The platform economy created entirely new opportunities for users to monetize what were previously private goods, but in doing so, created confusion for legal frameworks assuming a clear boundary between personal and commercial use. One example is laws around local land use and zoning, which carry their own restrictions and local taxes. Many cities, particularly American cities, design zoning in a way to separate out residential parcels from businesses or hotels. The introduction of Airbnb enabled homeowners to use their house in a way that defied its zoned purposes. The blurring of personal and commercial activity also creates liability concerns, as the legal obligations of an owner of a home (or any asset for that matter) can radically change depending on how the asset it

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27 Finck and Ranchordas, “Sharing and the City.”
used. While these platform innovations may appear positive to investors or sharing advocates, policymakers rarely take kindly to regulatory systems being upended.

Another regulatory puzzle created by the platform economy is the paradox of the massive size of any given platform with the small-scale transactions being facilitated. In other words, the platform economy can be understood as ‘the large-scale occurrence of small-scale activities.’

Many small-scale activities are given legal leniency, either because the harm is minimal or the cost of enforcement is too high. For example, it is unthinkable for governments to aggressively monitor occasional babysitting or nannying jobs, even though the activity may not comply with labor laws and create unprotected liabilities. The cost of examining every transaction would be immense (if it is even possible), and the harm is relatively small in a single transaction. But consolidating babysitting gigs onto a single platform aggregates the exchanges. An activity that was previously small and informal becomes large and standardized. This process magnifies the potential harms of a form of exchange while also offering a new means for regulators to administer restrictions. Through the act of consolidating previously uncoordinated activities, it is also harder for regulators to ignore an activity. When facilitated by a platform, the same market that existed without scrutiny can become a focused concern of regulators.

The dynamic of scale helps explain much of the concerns raised with major digital platforms. For example, while any individual renting out a room is a minor issue, too many short-term housing rentals in a neighborhood can stoke fears of raising rents and gentrification. The status of workers relying on ‘side jobs’ become a great concern to regulators when the ‘gig economy’ scales and formalizes previously informal norms of worker protections and compensation. By scaling up small exchanges, platforms create new profitable markets but also receive scrutiny for the negative externalities of their underlying activity. A common theme among platforms is an attempt to use branding that emphasize smallness by focusing on the human exchanges between individuals rather than their overall size. For example, Uber emphasizes its role in providing opportunities for entrepreneurial drivers in need of income. However, this rhetorical emphasis does not mitigate the immense scope of their operations and the regulatory scrutiny accompanying their growth.

Considering the policy concerns raised by digital platform companies, many scholars see cause for rethinking entire categories of existing laws. The platform is seen as an unprecedented advance demanding an unprecedented policy response. Platform enthusiasts call for a reimagining of everything from taxation to zoning to employment law in order to effectively govern platforms without inhibiting their innovative progress. Even without presuming the goodness of platforms, legal thinkers emphasize the need for flexible regulations that account for platforms’ varying use cases, such as tiered regulations based on how frequently participants use

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29 While I picked babysitting as a simple and common example, a quick google search revealed there are indeed plenty of babysitter platforms, enough to merit an article guiding consumers to which one is best suited to their needs: https://www.fatherly.com/gear/best-babysitting-websites-apps/


31 Zale, “When Everything Is Small.”

Others concerned about slowing the rate of platform innovation emphasize the use of self-regulatory approaches, which are privately-run governance organizations meant to ensure compliance within an industry. The common approach in this literature is a focus on the novelty of the platform economy, the inability of existing regulations to account for platform behavior, and proposals for how to bridge the identified gaps. While this approach generates unique ideas for policymakers, it can often be too general to be helpful by attempting to provide solutions across varying levels of government for a multitude of sectors.

A related question to how platforms ought to be regulated is the question of who ought to do the regulating. Deciding which level of government is the appropriate venue for regulating platforms is significant and often overlooked. This gap in the literature was helpfully identified by Sarah Light “Precautionary Federalism and the Sharing Economy,” in her proposal for precautionary federalism as a model for overseeing evolving platforms across various levels of government. Precautionary federalism in this instance encourages the use of multiple regulatory voices and discourages preemption in the face of uncertain outcomes. Focusing on the level of government is critical because many of the regulatory questions for platforms occur at the city or municipal level, and cities face their own unique challenges and priorities in crafting local policy. The implications for municipal government will be explored in greater depth later in this research.

Another critique of policy issues surrounding platforms is a tendency to ignore the sector in which a platform is operating. Many policy regimes are sector-specific, and a fixation on the general features of platforms can lead scholars to ignore the existing policies in place. While limiting platform policy recommendations to a specific sector makes final claims less universal, it clarifies the precise challenges regulators face. Or at the very least, conclusions about platform technologies should analyze a variety of sectors before making generalized claims so the legal norms in domains such as transportation, food delivery, home rentals, dog walking, babysitting, and furniture assembly are not ignored or conflated.

The debate over policy responses to platforms mirror the boundaries drawn in the broader debate over governing technology laid out in the previous section. While those who emphasize a technology’s novelty see a need for generalized responses, others emphasize the need to tailor reactions based on contextual considerations such as the sector and level of government. Just as Lyria Bennett Moses’ argued focusing primarily on innovation causes scholars to ignore the

34. Cohen and Sundararajan, “Self-Regulation and Innovation in the Peer-to-Peer Sharing Economy.”
socio-technical context surrounding a given innovation, those fixated on platforms are tempted to ignore unique dynamics within a specific policy regime.38

**Cities and Previous Policy Battles with Platform Companies**

Many of the legal questions and challenges surrounding the digital platform economy happen at the city or municipal level, in large part because cities offer the conditions necessary for platforms to thrive. The primary reason is that cities possess the requisite density of people to profitably function. Take a ridesharing company like Uber for example. Without a critical mass of drivers, a lack of available cars makes the service unattractive through longer wait times and higher prices. The loss of interest by riders in turn disincentivizes drivers, who do not want to waste time waiting for long periods between rides. Conversely, the network effects of a market full of readily available drivers and riders makes Uber more valuable to users and creates a positive feedback loop for further growth. This same need for density of people extends to the rest of the platform economy involving any exchange of assets or labor requiring spatial proximity.

Platform services are also concentrated in cities because they are often crafted for to solve the unique challenges facing urban residents. The ‘congestion costs’ of dense living promote innovations to improve the quality of urban life.39 For instance, the high land prices in cities makes car parking scarce and more expensive, making platform ridesharing more attractive. The combination of density and the challenge of urban living have led some to describe urban conditions as the ‘hidden architecture’ of the platform economy.40 This explains why local policies are a primary concern for platform companies and why municipal leaders are concerned about how to manage the policy disruptions created by platforms.41

While there are many examples of the urban policy conflicts with the platform economy, short-term home rentals and transportation ridesharing are far and away the dominant focus of researchers, justifiably so given their rapid growth and impact on urban life. Specifically, researchers focus on the two highest-profile companies in those respective categories, Airbnb and Uber. Both companies were founded around the same time, are valued in the tens of billions of dollars, rapidly scaled their operations through immense venture funding, and are darlings of Silicon Valley and business thinkers alike.42 More importantly, both companies were at the forefront of repeated, high-profile (and ongoing) legal battles debating how digital platform companies ought to be governed in the heavily regulated industries of transportation and lodging. Such legal drama has been too tantalizing for researchers to ignore, and Uber and Airbnb have since become the archetypal examples for analyzing the platform economy’s relationship to urban policymaking.

As described earlier, Airbnb creates a myriad of challenges for local leaders trying to balance the benefit of increased tourism with the land use, congestion, and gentrification concerns

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38 Bennett Moses, “How to Think about Law, Regulation and Technology.”
40 Davidson and Infranca, “The Sharing Economy as an Urban Phenomenon.”
41 Brail, “Promoting Innovation Locally.”
associated with the platform. The range of regulatory challenges and the overwhelming number of municipalities engaging with Airbnb has resulted in extensive research across multiple disciplines. One common question is to record what types of regulatory response cities have taken to Airbnb in a specific region or across major global cities, often using the same framework as this research (described in the methods) for classifying regulatory responses. Economists have focused on measuring Airbnb’s impact on rents in local markets, whereas geographers and sociologists have explored the relationship between the company and gentrification. Others have attempted to measure a relationship between political competition and more favorable Airbnb regulations and whether clearer regulations lead to increased Airbnb participation.

Without attempting a whole-sale review of the Airbnb literature, the breadth of sampled research demonstrates the comprehensive challenge Airbnb poses to local regulators and the need for greater understanding of how varying policy approaches impact short-term home rentals. This research also demonstrates what is at stake when municipal leaders make policies for home sharing platforms, as any decision affects the economic and social well-being of residents, shapes the livelihood of the existing tourism ecosystem, and can impact municipal budgets. Municipal policymakers face a complex, multi-dimensional political problem in making policy for home rental companies like Airbnb, and there are no simple resolutions to the tradeoffs they face.

A similarly complex picture emerges in the research on Uber, though the specific questions are not the same. The arrival of Uber was notable, especially in its early growth, due to its rapid expansion, aggressive confrontations with regulators and the taxi industry, and high-profile legal battles. Researchers have been fascinated by Uber’s tactics in dealing with political entities and have sought to describe their legal and lobbying methods, either by comparatively sampling their arrival in multiple cities or case studies of single cities.

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existing taxi regulations in light of Uber’s arrival or sought to compare the efficiency of Uber relative to traditional taxis. Research has also sought to quantify the ridesharing industry’s effect on traffic congestion and environmental impact. Again, this is merely a sample of a much larger body of work, but it illustrates the diverse factors policymakers face in responding to a ridesharing platform like Uber. Municipal leaders face immense tradeoffs in balancing the interests of existing taxi industries, providing transportation services to residents, avoiding unnecessary litigation, all while trying to improve traffic efficiency and minimize environmental harms.

**Foundational Dynamics in Municipal Policymaking**

Before diving into the specific technology and focus of this dissertation’s research, it is also important to briefly note the foundational priorities of cities and their leaders. Municipal leaders deal with far more issues than just platforms, and their responses to technology is often mediated through their more fundamental policy goals. This taps into a vast body of literature worthy of more ink than it will receive here, but a brief survey of the material is essential and helpful. To start, cities are diverse and varied, as the needs of Boston, Bangalore, and Bakersfield are wildly different. But a common feature of cities is their role as engines of economic activity and innovation spurred on by the agglomeration of highly-skilled people and firms. This has led to considerable effort by policymakers and scholars to understanding the dynamics resulting in urban growth and what factors stimulate urban entrepreneurship. Of course, cities represent far more than economic output, and play equally significant roles as sources of social and cultural vibrancy by simultaneously being home to diverse residents and the host of wide-ranging activities. A clear tradeoff cities face, then, is figuring out how to promote innovation and growth while balancing the resulting changes with the needs and values of incumbent residents.

However, it is too simplistic to portray cities as battlegrounds between growth boosterism and existing residents. On any given issue a city faces there will be a variety of incumbent firms and residents who either support or oppose a given change. Take the often-contentious decision to increase the zoned capacity of a given neighborhood and allow more residents. While incumbent renters may support the initiative hoping for newer units and lower rents, existing homeowners may oppose the change to preserve the neighborhood’s architectural character or demographic composition. Similarly, existing construction and real estate firms might champion the new business opportunities in selling more units while a local small business may protest the
ongoing construction or new business competition of additional stores. The alignment of these stakeholders varies, but it is worth evaluating and examining which groups support and oppose a given change, particularly as local policymakers attempt to navigate local interests.

The tradeoff between increased dynamism and the needs of existing residents lies at the heart of many challenges to urban leadership, including the platform economy. Too great a focus on current residents can limit growth, such as when cities artificially limit housing supply due to residents’ demands, and in doing so slow down their economic development. On the other hand, too great a focus on growth such as that seen during America’s mid-century ‘Urban Renewal’ period can force existing resident to bear immense costs, much of which is not captured in quantitative models. This tradeoff shapes the mentality of city leaders and impacts their approach to the platform economy. On the one hand, platforms can provide novel amenities, particularly for young college graduates at the center of American cities’ recent growth. But as described before, platforms can disrupt industries, justifiably upset residents, and create political headaches. For every new platform company, a new set of tradeoffs will emerge that city leaders are forced to articulate and grapple with.

The Emergence of Shared Urban Micromobility

After tightening the focus of this writing from broader challenges of governing innovation to how cities evaluate the platform economy, it is now time to turn to the specific technology at the center of this research, shared electric scooters (e-scooters). This section will analyze how the industry emerged in relationship to previous forms of urban mobility. Shared e-scooters are perhaps the most prominent technology within the more inclusively termed “shared micromobility” industry, but they certainly were not the first. Shared e-scooters are best understood as one form of a broader trend of technologies and businesses serving urban transportation needs. Specifically, e-scooters can be seen as an extension of existing bike share programs paired with the growth tactics of dockless shared bike programs and ride-share companies, otherwise known as transportation network companies (TNC’s). A brief history of those relevant industries will help contextualize how shared e-scooters came to emerge in the manner that they did in late 2017 when this research’s case studies begin.

Brief History of Urban Bike Share

Modern bike share programs first emerged in Europe, and the first instance was a 1965 Amsterdam program called Witte Fietsen (White Bikes) that involved free, unlocked bikes placed throughout the city for public use. While vandalism due to a lack of bike security prevented these earliest system from scaling, later bike share models involving payment and user

52 Downs.
identification began spreading globally in the early 2000’s. These “IT-based systems” typically relied on multiple docking stations throughout cities. Riders could begin at one station and end their ride at another, and stations were typically placed in high-traffic destinations. These stations also facilitated user payment along with the securing and tracking of bike fleets. IT-based bike share systems were quickly adopted and shared among global cities, growing from 13 to 855 cities from 2004 to 2014. Cities in the U.S. were slower to adopt docked bike share systems than their European and Asian peers, but the industry grew steadily in the U.S. from four systems in 2010 to 55 in 2016. Ridership also grew steadily to over 36 million annual trips by 2019, with roughly half the trips taken in New York City’s Citi Bike system.

The docked bike share industry was marked by cooperative partnerships with city governments. In part, this is because there was no other way to launch and operate a system. Installing a critical mass of docking stations and bikes took time and required approvals from cities to install docking stations on public streets and sidewalks. This business model also tended to involve single operators being granted a monopoly in each city’s market. Docked systems were not cheap to design, study, install, and operate, and any hope for a system to be profitable (or at least not require too large a public subsidy) prohibited market competition. While most U.S. cities lacked any form of bike system prior to the growth of docked bike share, the process of operating a system did not represent a significant policy disruption from how cities operate any other contracted service, especially transit services. Once a city decided to launch a bike share system, they could put out an RFP and procure a contracted service just like any other local services. Docked bikes were largely viewed as a means of extending a city’s transit system with the addition of an alternative mode to roads, buses, and trains.

The more radical policy break for bike share came with the next generation of systems that included dockless bikes, which were enabled by ubiquitous smartphones and cheap sensors to store in each bike. This new business model quickly scaled with the operation of several Chinese companies who around 2016 launched 20 times more bikes than existed in all the prior docked bike share systems combined. These newly crafted devices were primarily launched in countries with established biking culture and bike systems, namely China and Europe. However, dockless bikes also appeared in the U.S., and the experience of several cities served as prominent case cities in the eyes of L.A. cities when shared e-scooters launched.

The most significant example was Seattle’s dockless bicycle temporary permitting program. Seattle previously had a docked bike system end in 2017, leaving it as one of the largest U.S. cities without any form of bike share. In response, the city launched a temporary permitting

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55 Shaheen, Cohen, and Martin.
56 Fishman, “Bikeshare.”
program with private dockless bike share operators in late 2017 that would allow private operators to launch in the city under certain safety and insurance requirements. An alternative, largely negative, example in the eyes of Southern California governments was Dallas’s hands-off approach. Dallas had chosen to not limit the initial growth of dockless bicycles and by the beginning of 2018 had roughly 20,000 dockless bikes in the city, the most in North America. Neither Dallas’s and Seattle’s experiments with dockless bikes were mature by the time e-scooters launched in Southern California, as both cities were either still crafting their policies or assessing the longer-term impacts. However, as will be shown in the subsequent case studies, both cities’ experiences loomed large in the minds of Southern California policymakers as they decided what to do in response to e-scooters.

*The Political Legacy of TNC’s*

In addition to bike share, TNC’s, also known as rideshare companies, are the other significant urban mobility industry that shaped the rollout of e-scooters. As noted earlier, the TNC’s, notably Uber, deployed an aggressive suite of tactics and engagement strategies with U.S. municipal leaders as they sought to grow their market share and win regulatory approval. These tactics would inform the thinking of early e-scooter companies, which contributed to some of the subsequent policy dilemmas for city leaders.

The two largest TNC’s, Uber and Lyft, were founded in 2009 and 2012, respectively, and emerged during a period of enthusiasm around the potential of the sharing economy. Their core business model, which largely remains unchanged, involves coordinating a two-sided marketplace connecting private car owners with individuals in search of rides. Unlike shared e-scooters, TNC’s challenged an incumbent industry (taxis) that were well-established and regulated at the municipal level. Both Uber and Lyft engaged in intense battles with state and local regulators to allow their continued operation. One study of the policy response to Uber found that in the largest North American cities, Uber was seriously opposed by nearly all local authorities but eventually won the legal status to operate. By gaining the ability to operate, Uber and Lyft created and dominated a massive market, with both companies eventually going public in 2019 with 11-figure market valuations that generated massive windfalls for executives and early investors.

The financial success of the major TNC’s made their regulatory approach attractive to other company founders and investors seeking to make similar fortunes. While both Lyft and Uber confronted significant opposition, Uber established a particularly brash style of engagement under founder Travis Kalanick. Uber, being the first of the two companies to launch, was often the first TNC to enter a city. Uber’s regulatory engagement strategy is best summed up by the oft-used mantra, “it is better to beg for forgiveness rather than ask for permission.” Per the memoir of Uber’s political consultant who helped orchestrate their policy battles, the company’s strategy took the form of a law named after their founder:

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63 Spicer, Eidelman, and Zwick, “Patterns of Local Policy Disruption.”
“Travis’s Law, as it became known, says that in any jurisdiction with [democratically elected officials], Uber is better off entering the market with or without permission, demonstrating the product to the public, and building a customer base. When regulators then – at the behest of the taxi industry – try to shut Uber down, they turn their riders into advocates and use grassroots political pressure to ensure Uber’s continued existence.”

The final step of mobilizing political pressure revolved around using the companies’ app to generate automated emails from users to political figures, protesting decisions by suspending services, and identifying enthusiastic users to provide testimony at local council meetings. All these tactics would later be employed by Bird and other e-scooter companies during conflicts in the following case studies. The adoption of Uber’s tactics by e-scooter companies was not coincidental. Bird’s founder, Travis VanderZanden was previously an executive at Uber and Lyft. Bradley Tusk, the author of the above quote who served as Uber’s political strategist, went on to become an early investor and adviser for Bird.

TNC’s left a legacy of demonstrating a path to profitability through combative engagement with local policymakers combined with rapid scaling fueled by large amounts of venture capital. At the center of their growth strategy was launching without permission, moving quickly to gain market advantage, and leveraging local enthusiasm to combat any regulator’s attempt to shut down the services. One final legacy worth noting was TNC’s goal of avoiding local regulation all together. While many of Uber and Lyft’s battles occurred at the municipal level, eventually they succeeded in preempting municipal rules through statewide regulation, such as when the California Public Utilities Commission decided Uber was a “transportation network company”, thereby allowing the companies to operate under their purview so long as certain safety measures were met. More importantly, this decision meant California cities would not be allowed to ban the service, and many other states followed suit. Statewide preemption of cities regarding TNC’s loomed large in the minds of city leaders by the time e-scooters appeared. As will be shown in the case of Los Angeles, cities were invested in avoiding losing regulatory authority to the state as they did before.

**The Arrival and Growth of Shared E-Scooters**

Shared e-scooters were the next step in an ongoing wave of urban mobility options, and they arrived at an opportune time when well-funded investors were eager to fund novel, fast-growing companies. E-scooters combined the appeal of dockless bikes with the hard-charging tactics of TNC’s. The industry’s launch, specifically the launch of Bird, is detailed in the case study summary of Santa Monica. This section will briefly outline the industry’s early emergence, its defining characteristics, and relevant factors contributing to the subsequent policy disruption across cities.

In many ways, e-scooters are not an innovation in the typical sense. As industry expert (and coiner of the term “micromobility”) Horace Dediu puts it, shared e-scooters were, ‘not a ‘eureka’

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67 Spicer, Eidelman, and Zwick, “Patterns of Local Policy Disruption.”
type product” with unique intellectual property. Rather, e-scooter’s arrival and growth were the result of multiple technological advancements designed for other uses. Dediu lists the key enablers (and their original industry) as small, cheap electric motors (automotive industry), lithium-ion batteries (consumer electronics), GPS (military), smartphones (communication), and market-making software (TNC’s). E-scooters also benefitted from the supply chains and cheap Chinese manufacturing demonstrated in the scaling of dockless bikes that allowed mass-production of devices. This meant companies like Bird and Lime could quickly acquire and deploy many devices without having to design and manufacture their own hardware.

Shared e-scooters shared certain key features of other platforms even though they did not rely on mobilizing the use of private property like TNC’s or short-term home rentals. Instead, they operated two simultaneous platforms. The first was the offering of the e-scooter itself to riders, who could locate and access devices through each companies’ app. The second marketplace involved the maintenance of the fleet of devices in a city. While later companies deployed a variety of models, the first model involved paying individuals to charge (and sometimes even repair) devices each night in their home and then deposit them back on the streets the next morning for use. This second market of mobilizing gig workers to maintain a fleet of e-scooters allowed companies to quickly scale their operations without having to hire and manage teams of operating employees in every market. As seen in the subsequent case studies, it also provided competing narratives of the companies either providing economic opportunities to residents looking to make money by charging, or one of companies irresponsibly relying on a contingent workforce for critical operations.

Another defining feature of the shared e-scooter market was reliance on venture capital and rapidly scaling company valuations. The fastest growth occurred for Bird, who after launching in September of 2017, received $100 million in venture funding the following March followed by another $300 million three months later. The company achieved a $2 billion valuation in under a year, and at the time was the fastest company to reach a billion dollar valuation. Lime achieved similar figures once it deployed e-scooters, jumping to an over $2 billion valuation in February of 2019. While few other companies achieved headline valuations like Lime and Bird, the industry was flush with cash after launching. Investors believed e-scooter companies would be the biggest winners of the urban micromobility market, which in 2019 McKinsey estimated could reach $200-300 billion in the U.S. alone. Large amounts of venture both enabled and forced growth, as pressure for investor returns forced companies to scale their operations to meet the industry’s lofty aspirations.

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69 Dediu.
said at a micromobility conference, “having really abundant money and a single concern with topline growth is a recipe for conflict with cities.”

Investor’s early optimism surrounding the early e-scooter industry was driven not only by the devices’ popularity but also the perceived opportunity to transform urban transportation. One feature distinguishing feature of shared e-scooters from other forms of micromobility is how quickly e-scooters grew. As shown in Figure 2, within the first-year shared e-scooters surpassed the ridership of all docked bike share systems in the U.S. combined. E-scooter boosters were ecstatic about this growth along with the potential to replace shorter urban car trips. Industry enthusiasts argued micromobility offered a chance to “unbundle the car” by replacing short car trips with electric devices that produced fewer emissions, took up less space, reduced the need for urban parking, and could relieve traffic congestion. Driven by the insight that over 50% of U.S. car trips are less than 5 miles, the anticipation was that most car trips could be replaced by micromobility devices.

**Figure 2: U.S. Shared Micromobility Growth from 2010-2019, in Millions of Trips**

For the purposes of this research, it is not important to prognosticate about the future fate of the e-scooter industry, but instead to note that when the industry appeared it was novel, experienced unprecedented growth, and created a policy dilemma for cities. Even though e-scooters appeared as an extension of broader trends in shared, dockless micromobility, the

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77 “Shared Micromobility in the U.S.”
industry’s rapid growth created an unprecedented dilemma, particularly for the cities considered in this research. City leaders did not always share the belief that shared e-scooters would radically transform urban transportation, or at the very least did not welcome such experiments to be initiated without permission. Just like other platforms before it, the launch of e-scooters presented municipal leaders with a complex set of tradeoffs as they had to quickly determine a response.
3. Method and Approach

Classifying Policy Responses to Innovation: The Biber Framework

This research used an existing framework for classifying and analyzing policy responses to innovations proposed by Biber et al, which for the purposes of this research will be referred to as the Biber Framework. This framework was written in response to some of the referenced literature calling for foundational changes to policymaking in response to the growth of platform technologies. Biber et al. portray the arrival of the platform economy as merely one chapter in a continuous stream of new business models requiring policymakers’ attention. Their primary complaint is that scholars’ fixation on the novelty of the platform economy is ahistorical and overstates the need for new regulatory processes. Instead, in the spirit of Brownsword’s depiction of ongoing ‘regulatory connection’, Biber et al. argue the very nature of policymaking is to continually update policies to ensure it is compatible with new business models. Instead of obsessing over the uniqueness of platform technologies, policymakers should focus on defining policy disruptions, or disconnects between a regulatory system and the industry it oversees.

Biber et al. then define their framework, which includes four types of policy disruptions: an end-run when an innovator leverages ambiguous laws, an exemption when an innovator uses a clearly defined loophole, a gap when no laws exist, or a solution when laws inhibit an innovator from solving an agreed-upon problem. The provided example for an end-run is Uber, whose ambiguous status as a platform connecting riders and drivers created a question of whether to force adherence to taxi regulations. An example of an exemption is Airbnb when it comes to federal anti-discrimination law, which was written for hotels and does not apply to individuals renting out their additional rooms (i.e., Airbnb hosts were exempt). Gaps occur when an innovation is so distinct from existing practice that a legal regime doesn’t exist, Biber et al.’s example is the rapid rise of online advertising. Another example could be the arrival of mass transit via railroad, which lacked immediate precedent. Lastly, an example of a solution is the rise of distributed renewable energy, which helps solve the problem of creating clean energy but was hampered by laws overseeing the electric grid. Policymakers agreed on the need for renewable energy production, but existing policy inhibited the market’s growth.

There are also four types of responses in a policymaker’s toolkit. They can block a new business model, do nothing and provide a free pass, apply old regulations to new firms requiring they fulfill rules created for existing businesses, or create new regulations explicitly defined with a new business in mind. These categories are helpful for describing the ongoing legal interactions between platforms and regulating bodies and has been successfully used in recent literature documenting municipalities’ responses to platform companies. For example, all responses could be used to describe aspects of cities’ responses to Uber. A block would entail barring Uber from operating. A free pass would allow Uber to operate without any restrictions. Old regulations would allow Uber to operate so long as it adhered to the safety rules created for

78 Biber et al., “Regulating Business Innovation as Policy Disruption.”
79 Brownsword, Rights, Regulation and the Technological Revolution.
taxis, meanwhile a new regulation would mean discarding the old taxi medallion system and creating a new legal regime that accounts for both Uber and taxis.

**Figure 3: A Simplified Model of the Biber Framework**

The value in Biber et al.'s framework is the descriptive categories of how an innovation can be perceived and responded to by policymakers. The categories are well-defined and exhaustive and can be used across technologies and levels of government. Of course, policymaking is often messy, and the categories are not meant to be mutually exclusive, particularly with the classification of the type of policy disruption that occurred (shown in yellow in Figure 3). As Biber et al. describe in their paper, a single business can involve multiple, simultaneous policy disruptions in various elements of their business. Policymakers (and scholars) can also disagree as to which classification is most appropriate or accurate. For example, the previous sampling of the Airbnb literature demonstrates an ongoing debate over whether Airbnb works towards or against municipalities housing goals.

Similarly, there is often significant dispute over which final policy response (shown in green in Figure 3) is most appropriate. Decisionmakers must still weigh a range of what Biber et al. term ‘public policy factors’, i.e., the societal and political impact, of any innovation. These factors result in tradeoffs leaders face when deciding which policy response is most appropriate, that serve to benefit or harm stakeholders depending on their interests. Biber et al. do provide generalized guidance for selecting a policy response centered around the goal of designing policy that maintains neutrality between incumbent firms and emerging disruptors. Given the framework’s intentional generalization across all sectors and level of government, the advice is broad. It does not consider the unique contextual constraints of a specific technology and level of government, which is beyond the original scope of Biber et al.

**Use of the Biber Framework in this Research**

This research leverages the work of Biber et al. as a foundation for organizing and analyzing the specific, novel case study of the policy response to the arrival of e-scooters in the Westside of Los Angeles. The primary use of the Biber framework is to leverage their categories for describing and classifying the policy responses of the various city case studies. Specifically, this research considers the framing of a policy disruption and policy response as two distinct but related phenomenon. Most of the work in this research involves examining the actions of city officials and identifying how they classified e-scooters, what factors were involved in their classification, and then identifying what type of policy response was used. The Biber framework is extremely useful for this research in providing a consistent set of well-defined categories. As demonstrated in the following case studies, mapping the complex actions of city policymakers
onto these categories is not always straightforward. However, the framework’s strength is its ability to provide clear descriptions, which it does well.

Applying the Biber framework tests the extent the framework can explain the dynamics of e-scooters. At the end, this research will look to extend the Biber framework by identifying any aspects of the specific case studies that are not properly accounted for in its existing form. Additionally, this research will look to build upon the framework by identifying specific lessons cities or companies should consider when responding to future technologies. The goal of this final extension is to create actionable insights that reflect the real-world constraints of city leaders like those encountered through these case studies. The goal of these final considerations is not to update the Biber framework but rather translate the lessons from this research into tactical ideas city leaders can use.

Case Study Methodology

In this section I provide an overview of the case study methodology used for the subsequent findings. This will include a discussion of why use case studies in the first place, how cases were selected, the tactics used for gathering data, and the analysis used to find the ultimate results. The case study approach is well-suited to directly answer two research questions underneath the phenomenon of cities’ response to the arrival of e-scooters, previously identified as research questions #3 and #4.

- **RQ #3**: How did cities create policies in response to the arrival of e-scooters?
- **RQ #4**: What features caused e-scooters to become a concern for the case study cities?

In addition, the data gathered in these case studies will be used to answer research question #5:

- **RQ #5**: What insights from the deployment and response to e-scooters can help improve existing frameworks and guide how cities respond to future innovations?

While previous background sections outlined the political, technological, and economic context leading up to e-scooter’s launch, the case studies aim to understand how cities responded and why they made their respective policy decision.

As opposed to the first two research questions, research questions #3 and #4 are centered on the same unit of analysis, the city. Any attempt to answer these questions must therefore focus on cities and their decisions, and qualitative case studies of cities are a useful method for doing so.\(^1\) Case studies are also useful when the studied phenomenon, in this case the arrival of e-scooter’s and city leader’s responses, are messy and difficult to untangle. Cities’ response to the arrival of e-scooters fit Yin’s criteria well. First, cities had legal authority over whether e-scooters were allowed in their jurisdiction, making them the appropriate, ‘real-life’ context for analysis. But while the legal boundaries of cities are distinct, the underlying context and phenomenon of e-scooter policy decisions are messy and difficult to untangle. As shown in the subsequent case studies, responses to e-scooters involved bureaucratic idiosyncrasies, individual’s preferences towards technologies, and interpersonal conflicts between private and public officials. These interactions are all unique, and case studies allows what happened in each city to be considered

within its real-life context. Put simply, the complexity of cities must be accounted for, and case studies allow each city’s peculiarities to be taken seriously.

**Case Selection and Sampling Strategy**

This research included multiple city case studies to balance the depth of understanding the decisions of individual cities with the breadth of different cities that responded to e-scooters in different ways. Multiple cases ensure any findings are not simply the reflection of one city’s particular quirks. With multiple cases, the resulting framework changes could be validated, or theoretically replicated, across various cities.\(^{82}\) The number of ideal cases was set between 3-5 cities based on key selection criteria and resource constraints. Given the depth of data collection, namely the interviewing of stakeholders and analysis of city proceedings, it was not feasible to include more than 5 cities.

**Case Criteria**

The following criteria were defined prior to the selection of any specific city:

- **Presence of e-Scooters**: Any city must have experienced the arrival of e-scooters, as companies did not launch e-scooter services everywhere. This constrained the study to areas with the most promising use of shared micromobility, namely dense urban areas with high traffic congestion and higher household incomes.

- **Preference for Early Arrival**: Among municipalities where e-scooters arrived, preference was given to cities where e-scooters arrived earlier. These cities had fewer precedents to rely on for their decisions and had to respond to the technology as it matured.

- **Adopted a Formal Policy Response**: One of the key criteria for a city is to have debated e-scooters and adopted a formal policy response or acknowledgment. This excluded municipalities where e-scooters arrived in lower numbers, did not cause enough change to qualify as a true disruption, and did not receive formal policy attention.

- **Variation in Policy Outcomes (per Biber Categories)**: It is difficult to evaluate the Biber framework if all the cases in consideration had uniform responses. Analyzing 5 cities that blocked e-scooters is not as informative for understanding why cities choose between various policy options as comparing cities with different outcomes.

- **Not a Small City (over 30K population)**: City governments overseeing populations of varying sizes have different models of engaging with constituents, as larger cities have more diverse stakeholders, larger bureaucracy, and more specialized personnel. While the small number of case studies makes it impractical to divide the sample into multiple categories based on size, I chose to limit the sample to cities with at least 30,000 residents to ensure included cities had multiple transportation personnel, city departments, and were of meaningful size for e-scooter companies to lobby in their efforts to enter markets.

**Focusing on Los Angeles County**

In addition to the previous criteria, this research was limited to cities in Los Angeles County. One reason is that the initial e-scooter boom was largely concentrated in Los Angeles County, so most of the cities that fulfill the first criteria or early e-scooter presence reside here. The benefit

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\(^{82}\) Robert E. Stake, *The Art of Case Study Research* (sage, 1995); Yin, *Case Study Research and Applications*. 

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of this narrowed scope is the ability to focus on the unique factors within each city while holding factors like state and county law constant. While the availability of public transit access varies across the County, these cities also operate within the same regional transportation planning system. Limiting the scope to LA County also makes the case selection process more manageable.

**Selecting Case Cities**

The process for identifying which of the 88 cities in Los Angeles County were eligible within the criteria required several steps. The easiest first step was to eliminate cities underneath the 30,000-person population threshold, which left 56 cities.

The next two criteria to consider were the presence of e-scooters and whether a formal policy response was adopted. Based on limited data availability, especially of the initial placement of scooters, there was no reliable method for confirming which cities in LA County encountered scooters. There is no central repository of scooter location data from the earliest instances, and most of the companies only maintain information on their current programs instead of all their attempted programs. Cities may have also encountered e-scooters that migrated into their municipal boundaries in small numbers but were not intentionally deposited there by e-scooter companies. While local news coverage could be used to confirm e-scooter launches in higher profile cities, there was no way of verifying whether the absence of coverage implied an absence of scooters or a launch that was not news-worthy.

Due to these data limitations, this research relied on city council records to determine whether a city encountered enough e-scooters to merit a political debate or formal policy response. City council minutes, agendas, and video recordings are available online due to local government transparency laws. This provided a reliable means of assessing whether a city debated e-scooters or shared micromobility policies. It is possible that some cities encountered scooters but did not debate them because there were too few devices to merit political concern, or because any policy decision was handled within the city administration without being brought to council. Neither of these situations were common, and more importantly, any city lacking official council records would not meet other case selection criteria.

Evaluating whether a city council debated scooters involved several simple searches. The first source was Google News to search for any existing coverage of a city’s decisions. Each city was searched using the term ‘[city] electric scooters’ and ‘[city] e-scooter’ between the dates of 8/2017 through 4/2021 when this search was conducted. If any article contained mention of a city policy on the first four pages of search results, that was confirmation the city did pass a formal policy. News coverage was a quick method for identifying the policy outcomes in major cities, but many cities lacked any coverage on the topic. For each remaining city, I downloaded city council meeting agendas or minutes (whichever was in a searchable format) from 8/2017 until the 4/2021 and searched for the terms, ‘scooter’, ‘electric scooter’, and ‘mobility’. If none of the search results related to e-scooters, the city was considered to not have debated e-scooters.

Between the news search and search of city council minutes, there were 18 cities in L.A. County with over 30,000 people that debated e-scooters. This number was much lower than anticipated and demonstrated the concentrated nature of e-scooter deployment within the ideal municipalities. The final criterion was to select for a variety of policy outcomes within the Biber framework. Biber et al. provide 4 types of policy responses, including Block, Free Pass, Old
Regulation, and New Regulation (New Reg). Ultimately, the only available Biber categories among case candidates were Block and New Reg. (Appendix A). Santa Monica arguably deployed an Old Reg in their earliest policy response, but as detailed in the case study summary this research decided those actions did not meet the standard of official policy actions. Many cities passed clear Blocks through formal ordinances prohibiting e-scooters, while others passed operating agreements or pilot programs that were New Regs.

Of the 18 case city candidates, 14 issued blocks, one of which was eventually overturned into a new pilot program (West Hollywood). This meant 5 cities passed some form of New Regulation. These cities were West Hollywood, Los Angeles, Long Beach, Santa Monica, and Culver City. Given the limit of 5 case studies and desire for diversity in policy outcomes, not all 5 cities with new regulations could be included. The preference for earlier encounters with e-scooters meant that Santa Monica and Los Angeles should be included, but the remaining cities all encountered e-scooters in a similar time frame.

**Figure 4: Case City Selection Process**

Final Selection: The Westside Cities

Of the final 18 city candidates, the final case study selection included the cities on the Westside: Santa Monica, Culver City, Los Angeles, Beverly Hills, and West Hollywood. Not only do these cities meet all the established criteria, but they have shared geographic borders. Like the decision to narrow in on L.A. County, the decision to limit to the Westside allows a comparison of political decisions while holding broader characteristics relatively constant. This narrow geographic focus reflects the concentrated location of early e-scooter deployment, which started with Bird in Santa Monica and expanded to neighboring cities from there.

In addition to containing several examples of new regulations, the Westside cities provided ideal examples of e-scooter bans. Beverly Hills and West Hollywood both banned e-scooters and
faced serious enforcement issues as they were near or adjacent to e-scooter hubs. While there were 14 total cities in L.A. County that blocked e-scooters, many did so either preemptively or only after experiencing one deposit of e-scooters, neither of which provided adequate depth for a case study. Including Beverly Hills and West Hollywood as the two examples of bans provides two cities who experienced a heavy influx of scooters, were desirable markets to the e-scooter providers, and were near jurisdictions allowing scooters to operate.

Figure 5: Map of the Westside of Los Angeles (Los Angeles shown in pink)\textsuperscript{83}

Data Sources and Collection Methods

For each case city, multiple types of data were used with the goal of ensuring any insights could be triangulated across multiple sources.\textsuperscript{84} Document and video sources were primarily used to identify how cities made their policies and the factors underlying those policy decisions. Interviews were focused on exploring the various factors and motivations behind the policy decisions with a focus on conversations that occurred behind closed doors in each city hall.

\textsuperscript{83} City of Culver City, Information Technology Department, “Westside Cities COG (WSCCOG) Jurisdictional Boundary” (City of Culver City, October, 2013), https://www.westsidecities.org/about-us.

\textsuperscript{84} Yin, \textit{Case Study Research and Applications}.
Table 1: Data Sources

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documents</td>
<td>City Council Agendas, City Staff Reports, News Coverage, Industry Reports, Investor Updates</td>
</tr>
<tr>
<td>Video</td>
<td>Recorded City Council Proceedings</td>
</tr>
<tr>
<td>Interviews</td>
<td>City Staff and Elected Officials, Industry Representatives</td>
</tr>
</tbody>
</table>

**Documents and Video**

Document collection had already begun in the previous task of identifying case studies. Documenting the rise of the micromobility and e-scooter industry involved collecting most of the industry reports, investor updates, and news coverage that were later used. As described in the case selection process, city council agendas, minutes, and public council proceedings were easily accessible on each city’s websites. Each city’s records were combed through once more after being selected to ensure every city council meeting involving e-scooters was identified. Video resources of city council meeting were available on each city’s website and were linked in each city’s timeline.

**Interviews (City Officials)**

Interviews were the most critical data source for this research. Without talking to the individuals involved in the decision-making process it would have been difficult to understand the underlying factors, mindsets, and motivations behind city’s policy responses that does not appear in public meetings.

Two separate populations were interviewed: city officials and industry representatives. City officials were the primary population and represented the bulk of the interview subjects (N=29). The goal with each case study city was to request an interview with every key staffer and elected council member involved in a city’s e-scooter policy response. The next step was to email the City Manager, who oversees city operations, with a formal letter and ‘fact sheet’ (Appendix B) requesting an interview and explaining the research. After conducting an initial interview with the City Manager (or a senior city staffer in Santa Monica and West Hollywood where the City Manager was in the process of retiring), I then emailed the remaining relevant staff and elected officials involved in scooter decisions for emails. The goal of waiting until after the first interview with the City Manager was to gain credibility with other’s involved in the process, as well as starting my interviews with someone who was familiar with the broader political dynamics between city staff and elected officials.

City staff and elected officials were very responsive and generous with their time, and within each city I was able to speak with at least two elected officials and two city staff. In the case of Los Angeles, which is structured differently, I spoke with 3 representatives from the elected Councilmember’s offices most involved with e-scooter policy and two representatives from the City’s Department of Transportation. Interview length ranged from 45 minutes to 1.5 hours and were all conducted virtually over Microsoft Teams given pandemic restrictions on in-person meetings. Interviews with city officials took place from April 27 through June 11 of 2021.
Table 2: Summary of Interviews with City Officials

<table>
<thead>
<tr>
<th>City</th>
<th># Of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Monica</td>
<td>8</td>
</tr>
<tr>
<td>Culver City</td>
<td>4</td>
</tr>
<tr>
<td>Beverly Hills</td>
<td>6</td>
</tr>
<tr>
<td>West Hollywood</td>
<td>6</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

Interviews were semi-structured based on a discussion guide (Appendix C) of questions. As shown in the discussion guide, questions were also tailored based on a city’s policy outcome. In addition to transcripts, a summary of each interview was written as soon as it was completed. These summaries captured the most memorable moments of each interview, noted the themes that were most prominent immediately after they were done, and aided the final analysis by recording insights along the way throughout the research as it occurred.85

Each interview began with an overview of the IRB-approved informed consent guidelines, and each subject was notified that no direct quotes from the interviews would be used and that they had the right to not answer and question. The interviews were limited to each subject’s professional work related to the public roles. There was no set target number of interviews at which point a city was considered ‘completed’. I stopped reaching out to additional officials after every related staff member had been interviewed or had been contacted with an interview request several times, or the key decision-making factors were being repeated in interviews, which was taken as a sign of saturation.

**Interviews (Industry Representatives)**

Interviews with industry representatives (N=10) were conducted after the interviews with city officials. Some were identified from publications and by searching company representatives on LinkedIn. Others were identified during interviews with city staff based on their interactions with major e-scooter companies.

Industry representatives were either employed in a government affairs capacity by major e-scooter providers that launched services in case study cities during the arrival period or were industry consultants with relevant knowledge. Respondents included representatives from Bird, Lime, and Lyft. Each interview followed a separate discussion guide (Appendix D) and began with a similar informed consent process. Unlike the city official interviews, company representatives were not asked to speak strictly on behalf of their companies, but to speak more broadly about industry behavior and the factors leading to their strategy and tactics in rolling out e-scooters. While these questions inevitably involved reflection on their company’s practices, the

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industry-wide perspective allowed industry representatives to speak freely on the topic without compromising their own positions. Interviews with company officials took place from May 28 through July 12, 2021.

Analysis

While analysis related to both key research questions occurred simultaneously during and after the data collection process, the key analytical activities will be described in relation to the question they were used to answer.

Analysis of How Cities Created Policies

RQ #3: How did cities create policies in response to the arrival of e-scooters?

This first question within each case was much simpler analytically, as most of the difficulty involved collecting and organizing the disparate information for each case. Most of this work was completed during the case selection and evaluation process, which involved collecting and organizing records of each city’s policy outcomes.

After interview transcripts were completed for each city, I then had summarized descriptions of what happened along with official public records. The final step for writing each case city’s summary was to triangulate the various descriptions of what occurred based on the publicly available events, which involved rewatching city council meeting recordings, staff reports, and meeting minutes. The synthesized record of what occurred is represented in each case study description and summarized for each city in the final section.

Analysis of Why Cities Made Their Policy Decisions

RQ#4: What features caused e-scooters to become a concern for the case study cities?

Drawing conclusions on the motivation behind city actions was a complex and iterative process that involved several forms of qualitative analysis:

Recording and Memoing

The most substantive analysis occurred after the bulk of the interviews were conducted, but analysis spanned the duration of the data collection and selection process. This included a series of memos and interim summaries written during the interview process to note any observed findings, questions, or patterns. While none of these individual memos or summaries directly yielded a final conclusion or standalone insight, they were critical to the early formation of ideas and allowed for constant reflection on the data. Early summaries for each case city also allowed for an iterative reflection on the findings as they occurred – interim findings could be compared to the gathered data and guide further data collection and analysis.

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86 Yin, *Case Study Research and Applications.*
87 Barney G. Glaser, *Theoretical Sensitivity* (University of California, 1978); Miles, Huberman, and Saldana, “Qualitative Data Analysis.”
While memoing is more an analytical tactic than standalone qualitative method, it was a critical step that allowed final insights to emerge across time and be refined through iteration. This process proved essential for defining the shaping the final takeaways.

**Interview Transcript Coding: Bottom-Up Thematic Analysis**

After interviews were completed, I performed thematic analysis (using NVIVO software) of the various transcripts to identify emergent themes and factors explaining each city’s decisions. The goal of this step was to reflect on the patterns within the data and systematically record them as they were found. Unlike the separate coding process that relied on Biber et al.’s framework, this process sought to allow themes to emerge within each case city from the interviews without a pre-defined analytical framework.

Initial coding involved identifying passages where an interview subject stated a potential factor motivating their city’s decisions. The selected statements for each case city were then grouped where appropriate and duplicate factors were merged with one another. The themes were then organized into groups, creating hierarchies of factors. Given the similarity in themes across cases, similar final groupings emerged such as city council leadership, safety concerns, or city mobility goals. These final categories were then organized and summarized for each case city’s interviews and used as the foundation for analyzing each city’s decisions and informed the final case summary writeups. Hierarchical maps of the codes and emergent themes from the interviews with each city’s officials can be found in Appendix E.

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89 Miles, Huberman, and Saldana, “Qualitative Data Analysis.”
90 Stake, *The Art of Case Study Research.*
Interview Transcript Coding: Top-Down Analytic Framework Based on Biber et al.

The other form of interview analysis began with the established Biber categories for how decisionmakers frame policy disruptions (Gap, Solution, End-Run, and Exemption) and identified interview statements that suggested any of these categories. This approach most closely resembles what Miles and Huberman refer to as ‘mid-range’ coding, where broad coding categories were used to first organize the data before the later process of creating more specific sub-categories and recurrent themes. First, each city’s interviews were searched for statements either in support or against any one of Biber’s categories and tagged within NVIVO accordingly. Then, for each city, the organized statements were then reviewed, and where appropriate, organized into several sub-themes that emerged. This process was useful for comparing city official’s reasons for framing their response to e-scooters.

Figure 6: Top-Down Transcript Codes Based on Biber Framework

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91 Matthew B. Miles and A. Michael Huberman, *Qualitative Data Analysis: An Expanded Sourcebook* (sage, 1994).
Summary of Each Case Final Synthesis

The final step for each case was to integrate the coded interviews and data sources into a cohesive case summary that described the events in each city, the framing and decisions made by city leaders, and the key takeaways for the case, similar to what Yin refers to as explanation building. This integration allowed the various data sources to be brought together, and key events and issues could be triangulated between the city meeting recordings, staff reports, news coverage, and interview transcripts.

Final Synthesis and Considerations for Cities

RQ #5: What insights from the deployment and response to e-scooters can help improve existing frameworks and guide how cities respond to future innovations?

The final step in the analysis looked to integrate the findings across cases for consistent themes and considerations cities could when responding to future technologies. The power of comparing multiple case studies is the ability to validate a theoretical framework across the explanations found within each case, and this section aimed to distill the insights from the cases into concrete takeaways that cities could use. Whereas the previous step sought to summarize the findings within each city, this subsequent step looked to reconcile each city’s experience with the existing analytical framework and synthesize each case into generalizable principles. This process aimed to extend the Biber framework based on the insights from these case studies in a manner that will be useful for city leaders faced with responding to future innovations.

Limitations

The primary limitation of this research is the same as all case studies in that it is possible any derived insights may lack external validity. In other words, the lessons learned from the Westside of Los Angeles may not apply to Little Rock, London, or Lima. Similarly, the intentional choice to analyze the Westside of Los Angeles was not incidental, but rather reflected the fact it was the site of where the e-scooter industry began. Since the Westside of Los Angeles is a wealthy area within wealthy Los Angeles County, some of the lessons from this research may not apply elsewhere.

Ultimately this research aims to responsibly manage the limitations of the case study methodology by prefacing any final claims with a recognition that this research is of one technology in one specific part of the world. The research also aims to transparently document the insights and findings in a rigorous manner to ensure the findings do go beyond what is supported by the evidence. Even though this research does not offer a general theory of responding to urban innovation, its findings can support future efforts by thoroughly documenting what happened when e-scooters appeared.

Lastly, another potential limitation to this research relates to internal validity, ensuring my conclusions are justified by the data and not the reflection of the author’s predispositions. This research was performed by one individual, and the gathering and analysis of interview data and

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92 Yin, Case Study Research and Applications.
interpretation of city council meetings could be influenced by the author’s biases. To bolster internal validity, conclusions and findings were intermittently shared with external sources, and certain takeaways were confirmed with individuals outside the research. Several of the industry representatives had work experience with both city government and e-scooter companies and were willing to evaluate the findings from this research. Lastly, any findings were triangulated between multiple sources to ensure any findings were not solely based on this researcher’s interpretation of interviews.
4. Case Studies Overview

Each case summary follows a similar format including a brief background on the city’s state of transit, a description of how e-scooters appeared and how the city reacted, how the city’s actions fit into the Biber framework, and any key takeaways from the city’s experience. The summaries begin with Santa Monica where e-scooters first appeared. The subsequent cases are ordered to build on the takeaways and experiences of one another and are not based on any specific chronology.

Table 3: Background Statistics of Case Study Cities

<table>
<thead>
<tr>
<th></th>
<th>Beverly Hills</th>
<th>Santa Monica</th>
<th>West Hollywood</th>
<th>Los Angeles</th>
<th>Culver City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>33,274</td>
<td>88,991</td>
<td>36,051</td>
<td>3,983,540</td>
<td>39,437</td>
</tr>
<tr>
<td>Median Age</td>
<td>44.8</td>
<td>40.1</td>
<td>38.7</td>
<td>35.6</td>
<td>42.3</td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>8.25%</td>
<td>9.94%</td>
<td>11.72%</td>
<td>17.99%</td>
<td>6.07%</td>
</tr>
<tr>
<td>Homeownership Rate</td>
<td>41.5%</td>
<td>29%</td>
<td>19.1%</td>
<td>36.8%</td>
<td>52.2%</td>
</tr>
<tr>
<td>Median Income</td>
<td>$106,936</td>
<td>$96,570</td>
<td>$74,044</td>
<td>$62,142</td>
<td>$95,044</td>
</tr>
<tr>
<td>Population Density</td>
<td>5,829.4/sq mi</td>
<td>10,575.3/sq mi</td>
<td>19,099.8/sq mi</td>
<td>8,494.5/sq mi</td>
<td>7,716.4/sq mi</td>
</tr>
</tbody>
</table>

Summary Descriptions of Each Case Study

Given the length of the case study summaries, this section offers a summary of what happened in each city, followed by a discussion of each city’s actions as classified within the Biber framework. While the full answer to Research Question 3 (How did cities create policies in response to the arrival of e-scooters?) is distributed across the full case study summaries, the following section along with the subsequent analysis of the Biber categorization can be used as a briefer summary of those findings.

**Santa Monica**

Santa Monica was the first city to encounter e-scooters as Bird chose to launch their devices there in September 2017. Early interactions between city and company officials led to confusion as various departments within the city government took different stances and did not initially coordinate their strategy as Bird rapidly scaled their operation. The city soon filed a lawsuit against Bird’s lack of business licenses and refusal to comply with existing vending code, and soon after began relying on state vehicle safety laws as the basis for enforcing against riding on sidewalks or without helmets. The lawsuit was settled at the beginning of February 2018 in an agreement between the city and Bird, who agreed to partner in a public safety campaign and comply with certain safety features. The council then officially defined shared mobility devices and interim enforcement mechanisms the next month before passing a pilot program in June. The pilot received applications from over a dozen shared mobility operators, and four were chosen to provide a total fleet size of 2,500 devices that was adjusted based on usage rates and company compliance. City staff were given the authority to adjust the program without direct council approval, and the program eventually included geofencing requirements, digital enforcement

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tools, public education campaigns and improvements to the city’s biking infrastructure. The council considered the initial pilot a success after initial review and renewed for a second iteration.

**Culver City**

Culver City was the least politically dramatic of the case study cities. The city quickly agreed to an operating agreement with Bird in May 2018 (an agreement with Lime soon followed) instead of a competitive pilot process to begin operation as quick as possible. The city did not have a significant, unanticipated launch of e-scooters before the city’s actions, but some devices had been used in the city from users bringing them across the Los Angeles border. The initial agreements with Bird and Lime led to an average of just under 400 devices in the city each day during the first year. After the first pilot the city was disappointed with low ridership, an inability to recoup the city’s operational costs, and Lime’s decline to only a few devices in the city. The city subsequently created a new pilot program with an altered fee structure and new operators.

**Beverly Hills**

Beverly Hills leaders reacted strongly when devices began appearing within the city’s borders in the spring and summer of 2018 through smaller deposits or migrating from rides initiated outside the city’s boundaries. The city council banned the devices, first for 6 months with the stated intention of allowing companies to bring a new proposal to the city, then for several repeated year-long bans that carry until the present. The city council had listened to provider’s proposals to minimize the city’s safety and pedestrian concerns but had not found the proposals sufficient to merit piloting the technology.

**Los Angeles**

Los Angeles began facing e-scooters while crafting a shared, dockless e-bike pilot. Several council districts initiated district-specific pilots of the e-scooters early on, and the districts near Santa Monica also experienced a significant number of e-scooters as Bird and Lime’s early operations focused on the westside. During the preliminary council-initiated pilots, LADOT crafted a city-wide pilot with the goal of creating a template for all future transportation innovations. Key aspects of this program included data sharing standards, scalable enforcement that could be deployed citywide, and ensuring the city maintained regulatory authority over the devices (unlike TNC’s which became regulated by the state). The city passed a shared micromobility pilot program that allowed 8 providers to each provide up to over 10,000 devices if a series of equity incentives were met. While the city struggled to get operators to put devices outside the wealthiest areas of the city, the program was considered an overall success and renewed as an annual permitting program.

**West Hollywood**

West Hollywood was the most dynamic case as the city first banned the devices only to later allow them through a pilot program. Part of this change was due to an election shifting the composition of the city council and a need to replace the city’s failed docked bike share program. Lime first performed a “rogue launch” in the city over a weekend in March 2018 that was
quickly shut down. The city council reacted with strong opposition and rejected city staff’s suggestion of a pilot and banned the devices citywide. The ban led to enforcement issues as the companies chose not to retrieve impounded devices and inconsistently applied geofencing around the city. Eventually the city returned to the private shared mobility market as a replacement for the failing docked bike share. After an initial request for proposal with strict docking requirements went unanswered, the city requested proposals from dockless e-scooter and e-bike operators. After an election brought in two members who supported dockless micromobility the city then approved a citywide pilot program in December 2020.

Figure 7: Timeline of Major City and Company Actions
5. Santa Monica

Background

Santa Monica has significant transit connectivity within the city and the broader region, much of which opened in the last decade. Recent initiatives include the city’s 2011 Bicycle Action Plan, a Traffic Management Center in 2012, the 500 shared ‘Breeze Bikes’ in 2015, and the arrival of the E Line (formerly Expo Line) in 2016. The Dockless ‘Breeze Bike’ program involved 500 dockless bikes that averaged 1-2 rides a day throughout the City, which was managed by the City and occurred through $2 million in grant money to initiate the program. As shown in the following figures, the City had already invested in a significant number of bike lanes prior to the arrival of dockless shared mobility and has ambitious plans to build out more protected lanes. As of 2017, 68% of Santa Monica residents drive alone to work, and 90% of Santa Monica households own a vehicle.

Figure 8: Map of Bike Lanes in Santa Monica, 2018

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97 City of Santa Monica, Completed Bike Network and Current Projects, 2018, Current CIP Mobility Projects (Santa Monica: City of Santa Monica Mobility Department, February 27, 2018), http://santamonicacityca.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=&MeetingID=1135&MediaPosition=&ID=2622&CssClass=. 
The Arrival of e-Scooters and Policy Actions

Among all the cases cities, Santa Monica’s fate is most directly tied to the arrival of e-scooters given its location as the birthplace of Bird. The city was not only the location where Bird tested and developed its business model, but also where the form of political engagement and strategy between e-scooter providers and cities was forged. Santa Monica bore the brunt of the initial e-scooter wave and became synonymous with the chaos of the early e-scooter industry. The city’s early encounter with e-scooters and lack of precedent make it the ideal city for understanding initial policy reactions, but also makes it a more complex case to evaluate given the unique challenges of managing e-scooter policies in the earliest days.

First Launch – The Bird Origin Story

As described in the background section, the shared micromobility companies emerged from the existing bike share and ride-hail companies (also referred to as Transportation Network Companies, or TNC’s). Bird’s founder, Travis VanderZanden, came from the latter and was an executive at both Uber and Lyft. By 2017 he was then living in Santa Monica, which he would later refer to as, “a great place to experiment with new innovative environmentally friendly transportation” when asked about choice of location to launch Bird.

98 City of Santa Monica, “Santa Monica Bike Action Plan: Amendment” (City of Santa Monica, October 13, 2020), https://www.santamonica.gov/Media/Mobility/BAPA/SANTA%20MONICA%20BAP%20Amendment%20FINAL.pdf.
Earliest reports describe the first e-scooters hitting the streets in September of 2017. While the earliest tests comprised of a few e-scooters tested for their operational capacity, the company quickly scaled the number of devices on the streets to the point where they gained the attention of city officials. According to interviews with Santa Monica city officials, the earliest tests of e-scooters were seen as little more than benign novelties. This changed as the company rapidly sought to expand.

While it is difficult to trace the exact device count and timing of Bird’s initial growth, it was enough to capture the attention of residents and local leadership. As one official recalled, “the way the company introduced the birds made many Santa Monica residents feel they were in an Alfred Hitchcock movie.”

Hundreds quickly appeared on the streets of Santa Monica and neighboring Venice, and the company began to receive focused media attention as well.

**Analyzing Early Encounters Between Bird and Santa Monica City Officials**

While the media narrative around the company emphasized the city’s ‘ask for forgiveness, not permission’ mentality, there were several interactions with various arms of Santa Monica’s city government during this early launch. These interactions illustrate some of the challenges cities face in figuring out how to respond to this novel business practice and the confusion that ensued as several different city departments simultaneously figured out what to do. There were four forms of early interactions between various arms of the Santa Monica city government and Bird worth noting.

The first, which occurred prior to Bird’s full-scale launch, occurred between VanderZanden and staffers from the city’s mobility and economic development department where he described his vision for shared e-scooters in the city. While the recollection of various staffers, both those who were present and others, differ on the specific takeaways and content of that first meeting, several staffers recall expressing a sense of interest in his ideas as potentially in line with the city’s transportation goals. According to several city interviewees, the meeting ended with city staff asking VanderZanden for a written outline of any city codes limiting his business from operating so the issue could then be brought before council for consideration.

While that specific request for a proposal went unanswered, the second form of interaction with city officials occurred after Bird launched e-scooters on the sidewalk that attracted the attention of code enforcement. City officials soon got in contact with VanderZanden and demanded Bird receive licenses for operating on the city’s public right-of-way. Lacking any notion of a shared mobility device in the city codebook, officials insisted each of Bird’s e-scooters receive a food cart vendor license.

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103 Interview with Santa Monica Official, May 17, 2020.
While Bird’s e-scooters were launching, another interaction occurred between VanderZanden and the city via a LinkedIn message to then-mayor Ted Winterer. VanderZanden informed the mayor, “We have $3M in venture funding to focus on the traffic and parking problems in Santa Monica and Venice … I’d love to work together.” The mayor responded, “If you’re talking about those scooters that are out there already, there are some legal issues we have to discuss.” Winterer then referred him back to city staff with more intimate knowledge of the city code, some of whom VanderZanden had met with before.

The final and most significant interaction in this early phase, though, was the one that would force the various parties to come together – a lawsuit from the city attorney’s office. After Bird’s refusal to comply with the city’s request for code compliance, city prosecutors filed a criminal probe against Bird and VanderZanden on December 6, 2017. This lawsuit was initiated without the awareness of city staff and leadership in other departments, and given legal restrictions around criminal probes, city leadership were then limited in the extent they could attempt to guide the prosecutor’s efforts.

The varied interactions between Bird and the city may appear disjointed and perhaps even counterproductive, but there is reasonable justification when considering each actor’s priorities and incentives. Beginning with Bird, the company’s actions must consider their position as a rapidly scaling technology company backed by millions of venture capital investment. For example, the mobility and economic development team’s suggestion of undergoing a lengthy and public approval process by city council would be anathema to their desire to blitz their competition with growth. Elaborating on their business plans in a public forum would also violate industry norms of not revealing operational details to competitors. In the interactions with code enforcement, it is also understandable, albeit illegal, for a company to oppose paying costly fees for vendor fees clearly being applied beyond their intended purpose. As Travis VanderZanden recalled in a later interview, “We are not selling hot dogs and tacos … we felt we were in a gray area.” Lastly, the mayoral message may not have been intended to lead to a detailed policy discussion at all, but rather an attempt to restart negotiations with the city from a place of strength once the e-scooters were deployed and the company had garnered funding.

Similarly, each city official’s reactions align with their departmental roles and responsibilities. While the mobility team can champion new programs in line with the city’s vision, they lack the authority to sign off on new, high-profile programs on their own. Their proposal to clarify VanderZanden’s ideas under the code and present it to council is in line with all their other programs operate. Similarly, code enforcement and the legal department are not in the business of championing innovation. Their job is to maintain compliance with city code.

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105 Interview with Santa Monica Official, May 8, 2020.
108 Yakowicz, “14 Months, 120 Cities, $2 Billion.”
especially in the public right-of-way. While the department’s jump to a criminal probe may have caught leadership off-guard, cities regularly use the courts to ensure defiant businesses stay within the City’s legal limits. And lastly, the mayor receiving a message via LinkedIn would never amount to much. Santa Monica’s city council is not a ‘strong mayor’ city where the mayor oversees operations. The title of mayor rotates between the councilmembers, all of whom are part-time elected officials who have oversight authority over city operations but do not directly manage departments. Any firm proposal dealing with the legal intricacies of e-scooters would have to occur with the City Manager and the departments they oversee.

Above all, the early interactions between Bird and the city government demonstrate the challenge cities face when grappling with a new technology that scales as quickly as Bird did. City government is hardly designed to quickly integrate novel practices and business models that grow from a pilot to a fully formed operation within months. This tension in organizational culture and process led to increasing tension, and city leaders felt needed to find a way to assert their authority over the public right-of-way.

As Bird’s operational scale grew, so too did the tension between the company, residents, and city government. Public calls in support and against the e-scooters began to reach a fever pitch as city leadership needed to figure out their response. While departments tasked with keeping peace may have preferred to make the company be banned and go away to eliminate their headaches, other city leaders still saw the potential value in allowing the future of urban mobility to develop.\(^{109}\) It also would not hurt the Santa Monica’s brand for progressive, forward-thinking governance if the new technology was birthed in its backyard. Any promising future for micromobility required some degree of coordination and partnership between the city and Bird. While the city’s lawsuit had not been initiated with any strategic purposes in mind, it would eventually serve the city’s purpose in bringing Bird and the city leaders to the table to figure out what the future might look like.

**Settling the City’s Lawsuit and Interim Enforcement**

By the start of 2018 it was unclear where the relationship between Bird and Santa Monica would lead. E-scooters were still on the streets generating excitement and agitation from residents, and the pending lawsuit clouded Bird’s future in Santa Monica as the company continued its rapid global expansion. Santa Monica staff and council still were eager to find a path forward with continued service, but not if it meant unbridled e-scooter growth without any regard for orderly sidewalks and safety concerns. Before anything could move forward, the lawsuit needed to be settled, and it finally concluded after a summit between Bird and city leadership in the beginning of February, 2018.

Part of the motivation for settling the lawsuit was because tension between Bird and the city was beginning to boil over. Even though the city still lacked an ordinance defining micromobility devices, the city began enforcing the California Vehicle Code which prohibited

riding on the sidewalk and required wearing helmets.\textsuperscript{110} After several weeks of an educational campaign to inform residents of state law, the police began ticketing riders. The tickets were accompanied by a $190 fine, and the police handed out nearly 100 tickets in the week prior to the agreement to drop the lawsuit.\textsuperscript{111} Additionally, a woman suffered a head injury while riding a Bird e-scooter without a helmet after being hit by a car.\textsuperscript{112} By this point city leadership felt there was a need to intervene and calm the situation, and they arranged a meeting with Bird’s leaders.\textsuperscript{113}

While interview subjects were not able to share all the details of what happened in the meeting between the city and Bird, what emerged was a temporary agreement between the two parties that laid the foundation for the eventual pilot program. The city would drop its lawsuit, and in return Bird agreed the city’s terms. Bird accepted responsibility for operating without a proper business license and would pay the city over $300,000 for fines, citations, and legal fees. Beyond the fines, Bird also agreed to several changes to its operation to reduce safety risks. These included a week-long public safety campaign to promote safe riding, encourage riders to stay off sidewalks and not double up on e-scooters, reducing the top speed of their devices from 22 to 15 mph, offering free helmets to their users, and begin scanning individuals’ drivers licenses to prevent children driving.\textsuperscript{114} The company also released a statement that the company could start, “fresh with the city, and we look forward to continuing to provide a safe, environmentally friendly transportation solution to the people of Santa Monica.”\textsuperscript{115}

\textit{Setting the Stage for Official Council Action}

While the changes in Bird’s policy did not eliminate safety violations or eliminate Bird’s critics, the agreement opened the possibility of partnership between the City and Bird. Every Santa Monica official interviewed mentioned the settlement as a major turning point in believing it was possible to work together with Bird.\textsuperscript{116} City staff could now pursue their goal of some form of pilot program while being able to point to the agreement as proof they were working to eliminate e-scooter’s most glaring safety risks. The details of the interactions between the company and city are critical for understanding the political backdrop the city council faced when the issue was soon brought up for debate and policy action. According to several city officials, it was critical to establish the city would be able to effectively work with Bird and ensure the situation would not spin out of control as leaders attempted to craft their policies that would include multiple operators and devices.\textsuperscript{117}

\textsuperscript{112} Cagle.
\textsuperscript{113} Interview with Santa Monica Official, May 10, 2020.
\textsuperscript{114} “Bird Rides, Inc. Agrees to Plead ‘No Contest’ in Violating City Law and Will Pay Over $300,000 in Fines and Restitution,” City of Santa Monica, February 14, 2018, https://www.santamonica.gov/birdpleaagreement.
\textsuperscript{117} Interview with Santa Monica Officials, April 27, 2020, May 6, 2020.
By this point, the issue was ripe for consideration before city council, and several weeks after settling the lawsuit city staff presented council with a study session update on the implementation of their long-term mobility goals. This presentation rearticulated the city’s long-term commitment to mobility and demonstrated how shared electric mobility could fit into the city’s existing goals. Staff’s presentation emphasized the city’s three main goals – increase transit, walking and biking trips; implementation of the ‘Vision Zero’ campaign to eliminate severe and fatal car injuries by 2026; and a ‘complete and connected transportation network’ where travelers can utilize a suite of modes. The city manager chimed with a philosophical summation of the city’s challenge, “the streets were designed for a different era, so was the government.”

The staff report and presentation acknowledged the “unprecedented levels of private sector investment in transportation technology development,” and that the city “is a magnet for new shared mobility.” Rather than fixate on e-scooters, though, they contextualized the arriving technology within broader categories of new mobility. When updating the council on the city’s long-term transportation goals, staff did not even mention the ongoing drama with Bird and instead brought a longer-term view of shared micromobility as the most recent form of novel transportation innovations. Their report also acknowledged the convenience of this class of services and their potential to reduce emissions. However, they also emphasized the potential costs including safety, loss of the public right-of-way, the potential to cannibalize public transit programs and the inequity of the higher price of these services.

The study session did not present the council with any concrete policies to vote on, but it demonstrated Santa Monica’s city staff’s long-term framing of the challenges faced by the city as it grappled with these private services. One concern was questioning, “… what happens when new services cannibalize public transit but then go out of business?” Staff also highlighted the work of other cities, emphasizing Seattle’s fledgling dockless bike pilot program. Staff’s presentation did not resolve any fundamental dilemmas or instruct council on how they ought to vote on upcoming proposals. Rather, the discussion reminded city council of the key challenges in making shared mobility work for the city’s established aims, which set the stage for the first big vote related to e-scooters.

Passing the Emergency Ordinance

At the next council session after staff’s presentation updating the city’s mobility goals, the council was presented with an emergency ordinance on March 6. According to staff, the ordinance was, “meant to manage [shared mobility’s] existence. [The ordinance rules] aren’t
intended to put them out of business.” The ordinance was staff’s attempt to not only define shared mobility devices in formal code instead of classifying devices as vending carts, but also provide staff with the tools to keep the peace as an initial pilot program was finalized. Or in the terms on a slide in the staff’s presentation, the interim measure was meant to ‘allow time to develop a regulatory framework’ while also ‘prevent overwhelming the city’.

Staff presented several enforcement policies to the city council. The strongest of the alternative measures would include clarified language against the e-scooters being placed in the public right-of-way, the ability to immediately impound any e-scooter creating a hazard, and a fee structure up to $1,000 for certain violations to compensate for the enforcement costs. A less aggressive ordinance contained narrower violation criteria and only kept a $60 per device impound fee without the 4-figure administrative fines. In addition to outlining the alternative ordinance language, staff also presented images and a local news clip from Dallas’s dockless bike program, which was what the city wanted to avoid. Dallas had opted for no regulations and faced 20,000 dockless bikes being introduced since 2017 with piles of brightly covered bikes their street corners. Meanwhile, the Dallas council had delayed considering regulations until Fall of 2018. Staff’s implications were clear – delayed rules meant more chaos.

Several members of the council immediately made it clear, however, that the additional restrictions and fees were seen as an overcorrection. Gleam Davis compared the broad definitions of all devices in the right-of-way as a hazard as akin to “using a chainsaw for brain surgery” and argued that while, “I’m not against regulations, I just want to make sure we’re not regulating them out of existence.” Other members shared her fear the enforcement would be too limiting to the company operations and felt existing enforcement measures were sufficient. “I don’t see a need for the additional tools right now … the actions that I think we’re taking are far too aggressive.”

Other vocal councilmembers were also concerned the ordinance might limit the growth of micromobility but also used the chance to voice their criticism of Bird’s behavior. After Bird’s representative, who had recently been hired after time representing the Santa Monica chamber of Commerce, argued the ordinance was “rushed and heavy handed,” In response, several councilmembers objected to company complaints about the city’s clarifying their rules. Councilmember McKeown argued that Bird’s chaotic rollout, “has … forced us into a regulatory framework that will stifle innovation of other companies that come forward with great ideas,” and compared Bird’s behavior to a child refusing to put away their toys.

In the end, the council passed the ordinance, but stripped the enforcement measures even beyond the more moderate version staff proposed. All the fines were eliminated beyond the $60

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122 Santa Monica City Council Meeting, March 6, 2018.
123 Santa Monica City Council Meeting, March 6, 2018, 4:31.
124 Santa Monica City Council Meeting, March 6, 2018, 3:27.
125 Santa Monica City Council Meeting, March 6, 2018, 4:30.
126 Santa Monica City Council Meeting, March 6, 2018, 4:06.
127 Santa Monica City Council Meeting, March 6, 2018, 4:10.
impound fee and staff were permitted to remove any devices deemed a hazard to basic use of the public right-of-way. The amended ordinance passed 5-1, with the lone no vote coming from councilmember O’Day who felt even the pared down ordinance was too onerous. He did not want to see harsher enforcement but instead wanted the outlines of a pilot program, which staff promised to soon return with.

**Examining the Role of Santa Monica’s Institutional Capacity**

Before examining Santa Monica’s passing of a pilot program, it is worth noting the critical role Santa Monica’s government staff played in the time between Bird’s launch and the city’s pilot program. By the time of the emergency ordinance, Bird’s e-scooters had only existed for 6 months, and it would be another 3 months until the council voted on the official pilot program. This transition period between the policy’s arrival required considerable resources from city staff and officials, but these efforts are difficult to classify with the Biber framework. Biber’s framework emphasizes the framing and official policy responses, but the case of Santa Monica presents the need to account for institutional capacity in managing the change as well.

During this introduction period, Santa Monica’s city staff devoted significant resources to managing e-scooters in a manner that tested the operational norms of city operations. The most notable example was the city’s mobility team. While their initial meeting with Travis VanderZanden did not lead to much, they led the subsequent emphasis on the city’s mobility plan, examined other cities’ treatment of dockless bike share for comparison, and emphasized shared mobility’s value despite its potential to cannibalize their existing bike share program. Another source of additional staff capacity during this period was the use of code enforcement’s and public safety’s efforts including a messaging campaign and deploying dozens of officers to enforce state law in early 2018. Lastly, city leadership was willing to oversee engagement with Travis VanderZanden to settle the lawsuit, improve the company’s safety habits, and advocate for a workable pilot program even during resident pushback. Each city department disrupted their normal operations on behalf of e-scooters, and it is worth considering whether this impacted the eventual policy response of the city.

There are three potential explanations for understanding how staff’s actions shaped the policy response of Santa Monica. The first explanation would be that high-functioning city operations staved off chaos and opened the possibility of an eventual e-scooter pilot. In this explanation, the extraordinary efforts of the mobility team, leadership, and code enforcement altered the trajectory of Bird’s launch by dampening their most dangerous practices without eliminating the service’s core functionality. The city’s well-funded departments contained individuals willing to look beyond standard operating procedures fostered an innovative practice in its earliest, most chaotic days. This explanation is supported by assuming the eventual pilot policy rested on staff’s earliest actions and would not have otherwise occurred.

The second explanation would propose staff’s actions were unnecessary for getting to the final policy outcome. Consider the counterfactual world where staff did not devote the same resources to managing Bird’s introduction of the e-scooter market. While the outcomes in this hypothetical world are unknowable, perhaps the policy outcome may have been similar.
Proponents of this explanation would argue behavioral change from enforcement was limited, and that the public’s response to problematic e-scooter use may have tempered safety concerns without city staff engagement. However, the counterexample of cities like Dallas suggests the lack of intervention would hardly be beneficial, as the city’s hands-off approach led to continued safety violation, an eventual decision to increase enforcement and the eventual banning of all shared devices.\textsuperscript{128}

A third explanation would consider staff’s operations as counter-productive or unduly heavy-handed. Like councilmember Davis’s analogy of the emergency ordinance as using a chainsaw for brain surgery, perhaps staff’s attempts to enforce and limit Bird limited the market’s growth, dissuaded ridership or disincentivized operation. If this were the case, a counterfactual Santa Monica without restrictions would have witnessed greater ridership and fewer shared mobility market participants. It is possible such a world exists, and greater e-scooter uptake would allow the city to better meet their emissions and congestion goals. However, the city did not struggle to attract riders or mobility companies eager to do business, making it hard to claim the city’s outcomes were suboptimal.

Therefore, Santa Monica’s experience suggests the first explanation is the most plausible for understanding staff’s actions as an example of effective and enthusiastic individuals operating within institutional constraints. The initial interactions between the city and Bird, particularly the lawsuit launched without leadership’s awareness, could be seen as institutional limits in responding to a policy disruption. There was no easy way to manage the growing industry, and by the time a formal pilot program was passed, Bird alone had already expanded into dozens of other cities and scaled up their operations to roughly 1,500 e-scooters in Santa Monica.\textsuperscript{129} Also, this explanation accounts for the inherent limitations of working within government agencies avoiding liability and operating with legal constraints. They also are limited in how quickly they can operate and set up new programs. In this explanation, the individuals in the city government did what they could to respond to a company that emerged in weeks by using tools that often take months if not years to change.

**Establishing a Citywide Shared Mobility Pilot Program**

Council convened on the issue of the pilot in June of 2018, three months after the emergency ordinance was passed. In the interim months Bird’s e-scooters had proliferated, expanding up to 1,500 devices. Meanwhile, city officials had attempted to keep pace in eliminating user violations, issuing 360 citations in the previous month, more than the first three months of 2018 combined.\textsuperscript{130} Adding to the complexity was that Bird was no longer the only player in town.


\textsuperscript{129} City of Santa Monica City Council Meeting, June 12, 2018, https://www.smgov.net/departments/clerk/agendas.aspx.

\textsuperscript{130} David Martin, Director, Transportation Planning to Mayor and City Council, City Council Report, “Agenda Item7.B: Establish a Pilot Program for Shared Mobility Devices, by 1) introducing for First Reading an Ordinance
Lime had recently expanded beyond bikes and recently offered e-scooters in Santa Monica. The tensions on the streets spilled into the council meeting, where dozens of public commenters ranging from Bird representatives to irate pedestrians waited for their turn to offer the council their opinion.

Staff began their presentation by quoting Gabe Klein, a prominent transportation official from D.C. and Chicago who had recently visited Santa Monica and defined the city’s binary choice. “Cities can either drive change … or do nothing. But either way, the changes are happening, and if cities do nothing and keep their heads in the sand, they don’t get to shape or drive the change in ways that align with their values.” Staff then introduced their proposed ordinance for a pilot program to run from September 2018 until the end of 2019. While the ordinance would outline certain mandatory requirements like safety standards, up to 3 operators chosen through a proposal process, and a stating cap of 500 devices per operator, many of the other suggestions would be at the staff’s discretion to implement and adjust as the trial went underway. In addition, selected operators would be required to pay a $20,000 annual fee along with $130 each year per device, and the funds would be used to hire a new staff member to oversee the pilot program.

Staff emphasized the need for flexibility and their limited ability to anticipate every contingency, “in such a flexible and dynamic environment like we have right now.” Up until now, the city’s experience had largely been the direct engagement with the first market entrant, Bird. The proposed program intended to level the playing field and reassert the city’s authority over the operators. More operators were knocking on Santa Monica’s door, and the city wanted the ability to control who came in, but it was unclear how the market would react. While the city took inspiration from Seattle’s dockless bike pilot, their ‘oldest’ functioning dockless device pilot was less than a year old and did not offer any long-term lessons. There was also uncertainty over the types of features the city could expect from the fledgling e-scooter providers, so the specific over GPS requirements and data sharing protocols were left up to the staff to implement along the way.

Council then asked staff details about enforcement, how the cap would be adjusted, and compared the operator’s requirements to the city’s existing bike share program. Staff again emphasized the lack of precedent and clarity on appropriate device numbers and clarified that more devices could be added if operators could prove they were being used at least 3 times a day. The mayor then opened time for public comment with an admonition to residents that the discussion was about the overall pilot program, not a review of a single provider.

setting forth the Pilot Program, defining the terms and conditions of the Pilot and repealing previously adopted emergency regulations, 2) adopting a Resolution setting fees and charges for the Pilot Program, and 3) adopting an Emergency Ordinance limiting the renewal period for Vendor Permits for Shared Mobility Devices for FY18-19,” June 12, 2018.
131 Santa Monica City Council Meeting, June 12, 2018, 31:30.
132 Santa Monica City Council Meeting, June 12, 2018, 44:00.
Over the next two and a half hours the two-minute comments poured in with occasional questions from the council. Critics claimed scooters turned pedestrians into ‘bowling pins … we’re an endangered species!” Meanwhile Bird and Lime’s government relations representatives promised greater compliance and emphasized their efforts to create a safer environment. Bird’s lawyer was contrite and reminded council how the company had given out over 50,000 helmets to residents in the recent months. In addition to upset pedestrians, at least a dozen chargers emphasized how much they appreciated the extra income earned as freelancers for Bird.

By the final council discussion began the meeting had lasted nearly 4 hours, and the council was clearly tired. Councilmember McKeown argued in favor of passing the ordinance and how little certainty the city had about the future. “Cities like Santa Monica haven’t seen such disruption on our streets since Henry Ford flooded them with Model-T’s … our existing policies and regulations, like those of other cities, are inapplicable, inadequate, or inappropriate.” Several members amended the proposal to recommend staff examine an additional provider, fee adjustments, and e-scooter parking spaces. As the council meeting approached the 5-hour mark, the motion unanimously passed, and Santa Monica’s staff could now implement the city’s new pilot program.

**Competing Values When Selecting Shared Mobility Operators**

City staff soon got to work on defining the city’s program and addressing the most immediate challenge, selecting which operators would participate. A formal RFP was published on the city’s website on July 10, and the applications were due just over two weeks later. The results were 18 applications from 13 operators vying to be one of the two bike or two scooter providers. A preliminary selection committee was comprised of representatives from a range of city departments including police, transportation planning, and economic development. The 5 members met behind closed doors, and they went about scoring providers applications along 7 categories including experience, operations, compliance, and safety.

On August 10 the preliminary scoring was released, kicking off one of the more dramatic moments in the pilot program. To the shock of many, Bird not only did not make the top-two cutoff, even worse, it ranked 10th out of 12 applicants. Notably, the company’s ‘compliance’ and ‘public education’ scores was second to last. Lime, the other company to launch in the city prior to the pilot program, was 3rd worst in ‘compliance’ and ‘public education’ and ended up 4th overall. Instead, Lyft and Jump (Uber’s e-scooter division) were selected to provide both dockless bikes and e-scooters.

The two companies already operating on the city’s streets reacted by mobilizing their users, much as Bird had in the previous council meetings. Only instead of submitting hundreds of form...

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133 Santa Monica City Council Meeting, June 12, 2018, 2:14:30.
134 Santa Monica City Council Meeting, June 12, 2018, 4:01.
135 Shared Mobility Device Selection Committee to David Martin, Director of Planning and Community Development, “Selection Committee Rankings,” August 7, 2018, City of Santa Monica. https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Shared%20Mobility%20Selection%20Committee%20Memo_09072018_Final.pdf
letter, both companies temporarily halted their scooter operations within city boundaries as part of a ‘Day Without A Scooter’ campaign and invited regional users to protest the committee’s decision outside city hall. the companies handed out free shirts to attendees and Lime offered a $5 credit to attendees.\textsuperscript{136}

While the efficacy of these protests could not be confirmed, when the results came out 6 weeks later, both Bird and Lime topped the final list for scooter providers, with Jump and Lyft selected for bikes. The final selection was made by the Director of Planning and Community Development, who argued, “the selection of only Jump and Lyft could curtail the amount and quality of input the city receives into our shared mobility device program.”\textsuperscript{137} While both companies were docked points for compliance, they topped the scoring for ‘Ability to Launch’ and ‘Experience’. Bird and Lime would be able to continue their scooter operations in the city’s pilot alongside Lyft and Jump’s dockless bicycles.

Bird and Lime’s inclusion after their abysmal initial scoring is arguably a minimal detail too small to focus on in this case’s analysis. However, like the early interactions between Bird and Santa Monica’s city staff, these small details illustrate broader principles of how cities manage disruption. When justifying the inclusion of Bird and Lime over other competitive providers, the final administrative decision emphasizes how their presence and knowledge of the market will benefit their future operations. But critics of these companies’ aggressive launch tactics would point out that the only reason they had experience and proven ability to launch in Santa Monica is because they launched without permission. Companies who chose to wait felt excluded by the city because of their hesitance to previously challenge city laws.

There is no official, on-the-record reasoning why the companies were selected, and interview subjects did not elaborate on the topic. Taken at face value, the administrative decision to stick with the existing operators may have been easier to implement quickly rather than placing in new fleets and beginning relationships with new operators. The high-profile protests and press may have also created political pressure to maintain the companies rather than create more drama through removal.

Whatever the reason, the city’s decision is worth noting for understanding the tradeoffs companies make in how they engage with lawmakers. Bird’s initial violations and subsequent engagement with the city was enough to ensure their participation in the first pilot, suggesting more aggressive tactics are effective for establishing a user base and political pressure. There may be limits to that mindset, however, as it is worth noting that over the course of the pilot Bird

\textsuperscript{137} David Martin, Shared Mobility Device Pilot Program Operator Selection and Device Allocation Pursuant to Santa Monica Municipal Code (“SMMC”) Chapter 3.21, August 30, 2018 https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Shared%20Mobility%20Device%20Pilot%20Program.pdf
incurred significantly more fines than the other participants and was ultimately rejected when the next version of the pilot was renewed in 2021.\textsuperscript{138}

This saga also demonstrates the authority of the city’s decisionmakers and how the decision was ultimately political. This is not to suggest Bird’s blunt political tactics of protesting at city hall or generating thousands of user form emails to city staff forced the city’s hands, but rather that the scooter companies’ ability to operate depended on the decisions of city leaders, whether the councilmembers or senior administrators. Episodes like this may be what motivated Travis VanderZanden to later reflect how, “When Bird was starting out … we didn’t see [cities] as customers … but we learned quickly, and now we invest heavily in relationships with cities.”\textsuperscript{139}

While building a user base is important, the micromobility market ultimately rested in the hands of local decisionmakers.

Pilot Implementation and Review

From the pilot’s initiation on September 17, 2018 until the pilot’s extension near the end of 2019 the program operated in the hands of staff, who returned to council with a detailed, 71-page summary of the pilot’s impacts on the city.\textsuperscript{140} The program summary presented a sophisticated administrative program with detailed, evolving requirements, a far cry from earlier council meetings when staff were asking for basic enforcement mechanisms. Overall, the program was seen as a success with over 2.6 million rides during the pilot. If the city’s user survey was correct, 49% of those trips replaced car usage, meaning roughly 1.3 million car trips in the city had been replaced by e-scooters and bikes. Staff had also used the program’s revenue to help fund the painting of 19 miles of bike lanes a more visible green. The city had also introduced 107 drop zones painted on the streets and sidewalks to encourage orderly parking of the devices.

Safety concerns were still an issue. While citations had dropped over time, users were still frequently riding on sidewalks. There were 122 reported collisions, 10% of which resulted in severe injuries. It is difficult to assess the extent injuries were exclusively caused by scooter, as nearly half of the collisions involved a motor vehicle and the report did not include which party was at fault.

City staff were also able to make significant adjustments to their administration of the program over time. The city was one of the first to successfully implement geofencing around restricted riding areas, most notably on the city’s beach path that had been the epicenter of chaos during Bird’s earliest months. According to several interview subjects, city officials ironically pointed to Bird’s and Lime’s protests as proof the companies were able to restrict where devices operated through geofencing, which the city later mandated for the beach path. The city also adjusted fleet sizes from the original 2,500 devices in response to seasonal usage, peaking at


\textsuperscript{140} City of Santa Monica, “Shared Mobility Pilot Program Summary Report.”
3,250 devices. Fleet adjustment also became a compliance mechanism, as Bird’s fleet was reduced after several data discrepancies and unresolved complaints from residents.141

In addition to early use of geofencing, the city also sought to position themselves as leaders among other municipalities struggling to implement their own program. The city hosted a shared micromobility summit with representation from 15 other leading cities to collaborate on best practice. Members of the city staff also played critical roles in implementing and developing the Mobility Data Specification (MDS) in coordination with LADOT.142

When the program was presented before council for an extension in November of 2019, reaction was largely positive, albeit focused on improving the program’s clearest limitations regarding parking, riding on sidewalks, and equitable distribution of devices. The overall response from the council, however, was to extend the program and approve staff to conduct a second iteration with a largely similar structure. While several councilmembers argued a more exclusive franchising model may benefit the city and reduce administrative burden, they recognized how continued volatility in the operator market and uncertainty about which providers would remain in future years meant it was better to have multiple providers should one cease to exist. Council leaders also pointed out how unlike all other city programs, the shared devices had eliminated over a million car trips and generated money for the cities’ mobility infrastructure.

142 Interview with Santa Monica Official, May 17, 2020.
Biber Framing and Policy Response

Figure 10: Visualization of Santa Monica’s Framing and Policy Response

Santa Monica

Gap
Exemption
End-Run
Solution
Block
Free Pass
Old Reg
New Reg

Of all the cities in this research, Santa Monica puts the greatest strain on the framing component of the Biber framework given the complexity of the city’s response. It is difficult to classify the various actions across city departments and to reasonably balance interactions with Bird alongside their policy stance towards the broader industry. For example, reaction to Bird’s (and to a much lesser extent Lime’s) initial rollout strategy is the clearest evidence of an End-Run. The more significant Biber frames, though, would be a Gap. City officials appeared willing to tolerate End-Run antics because of their commitment to viewing shared electric mobility as a solution to their existing problems. They were quick to recognize the Gap in their regulations. While all three frames are critical for understanding how Santa Monica responded to the technology, Solution and Gap should be weighed with greater significance as they played a greater role in motivating the subsequent policy response.

Gap – Lack of Policy Precedent

Santa Monica’s use of the Gap framing focused on three main aspects of shared e-scooters: their legal classification, the lack of a city administrative program, and a lack of enforcement tools.

The most striking example of a Gap in Santa Monica was the literal gap in the city codebook when officials initially sought to require permitting of Bird’s early devices. The attempt to use codes applied to street vending carts demonstrated the lack of precedent for a privately owned and shared device operating in the public right-of-way. The city had to rely on the state vehicle code while continuing to press for vending licenses from companies. This gap contributed to the lawsuit between the city and Bird over the city’s authority over the right-of-way and wasn’t fully resolved until the emergency ordinance in March of 2018 that defined e-scooters in the city codebook.

The second, but most substantial Gap in the city’s framing was the lack of a regulatory program for shared devices that was ultimately resolved in the pilot program. While the city had already operated a shared bike system, they had never operated one with multiple private operators. Since the city’s previous bike share was a contracted service, a multi-operator shared
device system was considered something completely new. This framing is embodied by
councilmember McKeown’s view that, “cities like Santa Monica haven’t seen such disruption on
our streets since Henry Ford flooded them with Model-T’s.”

City leaders felt they were truly
facing something new that lacked clear precedent. While the city’s pilot program mimicked other
nascent city pilots, particularly Seattle’s dockless bike pilot, those programs had not existed long
enough to verify their results nor been applied in Santa Monica’s specific environment.

The final framing Gap from Santa Monica’s leaders is the gap in enforcement mechanisms,
especially in the early days of e-scooter’s arrival. City leaders recognized limitations in their
ability to enforce requirements on a digitally managed fleet. Initial enforcement during early
2018 was achieved through law enforcement, but interview subjects confirmed this strategy
required unsustainable amounts of staff time and was costly. The city manager pointed out
how e-scooters, “propose an unusual enforcement challenge. You can’t run them down with
patrol. You can’t chase them down with bike patrol and it’s really dangerous to pursue folks with
a squad car.” The recognition of a clear gap in enforcement capabilities led to the development
digital enforcement tools, particularly the use of data sharing standard (MDS) and geofencing
described in the final pilot results above.

End-Run – Bird’s Rollout Strategy

City leader’s clearest use of the End-Run frame focused on the initial drop of the e-scooters
by Bird and their initial resistance to the city’s code enforcement attempts under the vendor law
the company’s lack of business permits. End-Run categorization is not a comment on the legality
or ethical qualities of Bird’s actions, rather that Santa Monica’s leaders perceived the actions as a
rejection on the legal restrictions the city believed were within their rights. Multiple city leaders
emphasized their view the company launched in defiance of city rules with the intention of
‘asking for forgiveness instead of permission’ while claiming they were exempt from city rules
when the devices were not initially defined. However, this perceived End-Run framing took a
back seat to the belief e-scooters were a Solution to the city’s problems and a Gap that required
fixing that motivated the city’s piloting of a shared e-scooter regulatory framework.

Solution – Mobility vs. Safety

Lastly, Santa Monica officials primarily framed the arrival of e-scooters as a Solution to their
mobility problems but also recognized their launch stood in potential tension with their public
safety goals.

Existing Mobility Goals and Commitment to Finding Solutions

City leadership emphasized the city’s commitment and precedent of working to establish
sustainable mobility in the city at every point in the process of framing and responding to e-
scooters. The clarity of the city’s existing mobility goals alongside the number of resources

143 Santa Monica City Council Meeting, June 12, 2018, 4:01.
144 Interview with Santa Monica Officials, May 6, 2020, May 17, 2020.
145 Santa Monica City Council Meeting, June 12, 2018, 1:07:30.
invested in solving their challenges made them immediately committed to trying to make e-scooters work.

For years, Santa Monica officials had been aware of, studying, and investing in ways to improve mobility in the city. When interviewed about e-scooters in the earliest days of their launch, city mobility manager Francie Stefan cited a city study that 53% of city trips were less than 3 miles and could be met by e-scooters. She also emphasized how the city is, “always looking for other systems that would meet enough user needs to be necessary to add to the diversity of transportation options.”

The city’s most recent efforts on traffic and mobility are even traced in their report detailing the results of the pilot. The timeline traces back to the city’s 2011 Bicycle Action Plan, a Traffic Management Center in 2012, the 500 shared ‘Breeze Bikes’ in 2015, and the arrival of the E Line (formerly Expo Line) in 2016. ‘Mobility’ was also selected as one of the city’s five key strategic goals in 2016. The city’s inclusion of these mobility milestones demonstrated their credible framing of shared electric mobility devices as a continuation in their existing pursuit to greater mobility, albeit a program not initiated within City Hall like other city-run efforts.

The final reason city leaders framed e-scooters as a solution to their mobility issues was their quick and passionate uptake by users within the city. Over 2.6 million shared electric mobility rides were taken during the first 12 months of the pilot. Even though the startup operators’ venture funding initially suspended concern for unit economics in their early pursuit of market growth, the companies would not have expanded in the manner they did without thousands of users on the ground willing to pay to use their service. If anything, the problems of e-scooters were attributable to their viral popularity overloading capacity of the streets and sidewalks.

Before voting to oppose the city’s emergency ordinance, councilmember O’Day explained his unwillingness to risk dampening e-scooters success because of how difficult it had been for the city to get people to change their mobility habits. He felt that after years of trying, the city was finally witnessing, “an operation that has demonstrated that very magical ability to get people to change their behaviors and shift modes.”

*Threat of Upending Existing Safety Goals*

An important caveat is that the city also maintained safety goals, particularly their commitment to eliminating traffic fatalities, in addition to their desire to get people out of cars. While e-scooters clearly were popular, their excesses also presented safety risks that city leaders took seriously as a limit in their willingness to frame e-scooters as an unbridled good. Safety concerns were city leader’s primary focus in the council meetings on e-scooters and came up in multiple interviews. Several city interview subjects noted how one major e-scooter death in the early days could have made their defense of an e-scooter pilot politically untenable, and there were certainly injuries that provided a foundation for critics.

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147 Hall, “Bird Scooters Flying around Town.”
148 Santa Monica City Council Meeting March 16, 2018, 4:28.
At several points the city had to take action in response to injuries. In July of 2018 a seven-year-old boy had to have emergency oral surgery due to severe facial trauma after being hit by a scooter rider. A month later the city referenced this incident as justification for banning the devices from the Beach Bike Path, where the injury occurred.\textsuperscript{149} Local news carried multiple anecdotal accounts of injured residents, including stories of broken arms and a pedestrian who suffered a concussion after contact with an e-scooter.\textsuperscript{150} Even an interviewed councilmember recounted being hit by a full-speed e-scooter rider on the bike path.\textsuperscript{151}

For council and city leadership the key challenge was to discern whether critic’s stories of injuries were single anecdotes or broader trends, and then assess whether the injuries were uniquely caused by e-scooters or merely involved them. For example, a prominent incident on January 9\textsuperscript{th}, 2018 involved an automobile, as an e-scooter rider was hospitalized with a head wound. Initial reports indicated the helmet-less e-scooter rider rode through a stop sign and collided with a car traveling at an appropriate speed with the right-of-way.\textsuperscript{152} An identical situation could have possibly occurred with a bicycle, and city leaders had difficulty blaming the outcome solely on e-scooters. Nevertheless, city leaders cited the instance when cracking down on riding without a helmet the following month.\textsuperscript{153}

Not all incidents were so easily dismissed, though. Most concerning was a UCLA study analyzing e-scooter injuries that found injured e-scooter riders from 2017-2018 had head injuries at twice the rate of cyclists.\textsuperscript{154} Perhaps e-scooter riders took greater risks, were less experienced with the novel devices’ quick acceleration, or were unaccustomed to the novel devices compared to regular cyclists. More concerning were stories of injuries due to a malfunctioning device. City official worried that perhaps they were allowing or endorsing the use of devices with improper safety standards, repurposed plastic devices shipped from overseas manufacturers who were not designing with daily urban use in mind.\textsuperscript{155}

In the end, Santa Monica leaders focused enforcement efforts on curbing unsafe use but did not view safety concerns as enough to offset e-scooter’s value as a Solution to their mobility goals. City leaders tracked crash rates and noted in the final report how they declined over the duration of the pilot. They also noted that collisions with pedestrians, the main concerns of critics, only happened 9 times during the year.\textsuperscript{156} The eventual reduction in collisions suggested rider education and enhanced enforcement was effective in reducing accidents. Lastly, leaders


\textsuperscript{151} Interview with Santa Monica Official, May 8, 2020.

\textsuperscript{152} Cagle, “Bird Lovers Tweet as Tickets Ruffle Feathers.”

\textsuperscript{153} Cagle.


\textsuperscript{155} Interview with Santa Monica Official, May 17, 2020.

\textsuperscript{156} City of Santa Monica, “Shared Mobility Pilot Program Summary Report.”
also desired to be consistent in comparing e-scooters to other transportation modes. While e-scooter accidents were novel and grabbed headlines, leaders were also aware of the more frequent but ignored accidents caused by the very automobile trips partially being replaced by e-scooters.

Policy Response – New Reg

Within the Biber Framework, Santa Monica’s policy response is best understood as a New Reg from the moment it was brought before council for consideration. Council’s first related law, the emergency ordinance of in March of 2018, clarified the definition of shared mobility devices along with unique impound fees and clarity around the city’s ability to impound devices creating hazards in the public right-of-way. The official pilot program a few months later was also a novel policy regime for the city that treated shared electric devices and e-scooters as a new phenomenon distinct from previous mobility options. This view of the policy is reflected universally in council’s statements when passing the law and in interviews with city officials.

The only potential source of confusion in classifying Santa Monica’s policies arises from the period between Bird’s launch and formal council action. The earliest city enforcement and resulting lawsuit between the city and Bird fits Biber et al.’s description of an Old Reg as the city sought to apply existing vending cart law for the new business model. A similar case could be made that the city allowed a Free Pass to e-scooters between their launch in September 2017 and when large scale enforcement and the city lawsuit a few months later. Bird began scaling their services in September of 2017 and the city lawsuit did not begin until December of that year. However, these short-lived appearances of an Old Reg or Free Pass are best understood as interim moments, not a formulated policy response. The available evidence points towards a clear movement towards a New Reg, albeit with a certain degree of confusion when e-scooters first appeared and multiplied. In the early months when the e-scooters first appeared the city apparatus could only move so quickly as code enforcement sought compliance from Bird.

Santa Monica faced the e-scooters earlier, and in larger concentration, than other cities and had the least policy precedent to build upon. Later cities, particularly those pursuing an e-scooter ban, were able to quickly mobilize the forms of e-scooter enforcement they observed elsewhere. Santa Monica’s experience suggests there is a potential lag or pacing gap between the speed nimble private sector companies can roll out new services and the public sector’s ability to respond. While this gap was soon rectified as the city curbed reckless rider behavior and designed their pilot program, Bird’s early rollout is worth remembering when considering the possible policy responses to future technology rollouts.

Takeaways From Santa Monica

Santa Monica is a unique city. The city faced the earliest wave of e-scooter arrival, and perhaps dealt with the most legal and political challenges to implementing its policies alongside Los Angeles. The city’s actions were under the focus as the media considered the city ground zero for e-scooters, and it responded with a thorough regulatory program focused on their long-term mobility goals. Of course, the city was chosen as ground zero by the company in part due to the political climate and leadership, so the lessons may not apply to all other municipalities. The
city is most unique in how many e-scooters it had to deal with in so short a time span, making it the ideal case for analyzing the early responses to the launch of a new technology.

**Cities Are Not Unitary Actors**

It is tempting to consolidate city government into a singular entity, but even in a relatively smaller city like Santa Monica there are diverse interests within the organization. Each department has different standard procedures, key metrics, personnel, and aims, and they do not all respond to novel circumstances with the same priority. Santa Monica’s diversity in the government was on clearest display in the early arrival of e-scooters, as while the mobility team saw the merit of a pilot (pending safety concerns), code enforcement and the attorney’s office initiated a lawsuit with the company. Meanwhile the city’s elected officials received the arguments of e-scooters fiercest critics and supporters. Several senior city leaders emphasized the importance of balancing the various interests within the city government when setting a policy course. Eventually the city began operating with a singular focus once the lawsuit was resolved and the goal of a pilot was set, but even with a defined policy each department maintains their unique identity and goals.

**Cities’ Organizational Capacity is a Limiting Factor**

Crafting a pilot and managing the concerns caused by e-scooters required the attention of city staff on top of their existing roles and obligations. Several staffers described having to drop their other projects to attend to e-scooters when they arrived. The city used program revenue to fund two new staff positions focused on program administration, though the fees only covered roughly 80% of the new positions and contracted services. These costs were significant uses of staff time and were arguably increased given Santa Monica’s commitment to conducting a pilot, which required ongoing enforcement, engagement with stakeholders, and constant analysis and refining of the program by staff.

Santa Monica had several advantages regarding staff capacity. It already had a Mobility team within the department that was well suited to handle e-scooters, the city government was well-funded relative to most municipalities, and senior leaders were willing to navigate the political risks of the early e-scooter chaos. Crafting novel policies without clear precedent is difficult and time consuming, and the Santa Monica city government was the ideal partner for the task. It is impossible to know how e-scooters may have fared if the city government operated with less capabilities, perhaps the outcome would have been the same. But it is doubtful the city would have been as rigorous in their program design, implementation, and review without capable staff. While the Biber Framework focuses on the framing and eventual policy of a disruption, there is a need to consider a city’s capabilities in handling new policies. A city may otherwise engage in status quo behavior or ban new operations simply due to a lack of capacity.

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157 City of Santa Monica. “Shared Mobility Pilot Report” p. 47
Organizational Champions are Critical for Guiding Change

Santa Monica’s leadership, particularly the city manager Rick Cole, seems to have played an outsized role in getting the city to oversee a pilot program. Nearly every interview subject pointed to Cole as a key reason the pilot occurred, and his background as a former entrepreneur and experience leading multiple city governments seems to have provided a foundation for navigating the difficulties of the early e-scooter launch and help settle the lawsuit with Bird.\(^{158}\) It is hard to imagine the city achieving similar outcomes with leadership opposed to the presence of e-scooters. Santa Monica’s leaders helped ensure the city government focused on their long-term mobility and safety goals while also engaging with the mobility providers looking to enter the city. While the City may have still reached a pilot given the devices’ popularity and a supportive council, the relationship between the companies and city government may have been acrimonious and strained their ability to collaborate during the pilot.

Start-Up Companies’ Organizational Maturity Lags their Operational Capacity

Santa Monica is the clearest case where the early e-scooter companies’ services extended beyond their organizational capacity. In other words, at the same time when the company was able to manage a fleet of hundreds of e-scooters they still lacked an organized government relations team, the ability to lead significant public safety campaigns, or mechanisms for reliably resolving complaints. These issues were eventually resolved given the companies’ financial resources and ability to attract talent, but Bird and their peers mirrored other fast-growing venture-backed technology companies with relatively few full-time employees compared to companies with similar market valuations.

While the company was not limited in its ability to deploy e-scooters quickly, these operational limits limited Santa Monica’s early sense of partnership and perceived reliability of the company. At one council meeting a resident involved in an accident wondered whether Bird had the sufficient staff to resolve her incident, to which Mayor Winterer retorted, “I know [Bird] has PR people we will hear from.”\(^{159}\) The insinuation was that the company only invested in PR and growth-related positions and lacked similar personnel for compliance and customer complaints. This view was reflected in multiple interviews with city officials who mentioned Bird initially lacked necessary personnel to engage with the city.\(^{160}\)

Earlier in this case summary Bird’s founder was quoted as saying the company eventually realized cities were their customers, this insight may have been the turning point in the company investing in the personnel to engage municipalities. The venture-backed companies’ early emphasis on growth above all aligns with their incentives to increase their valuation and increase their market share. Metrics like quality of city engagement and headcount of city liaisons are not factors in most venture capitalists funding decisions. However, those metrics do matter to cities.


\(^{159}\) Santa Monica City Council Meeting, June 12, 2018, 2:11.

Information Sharing Between Cities is Mutually Beneficial and Critical

Santa Monica both relied on and contributed to a network of other city officials who were grappling with similar issues, and the value of intra-city networks was reflected in staff reports and interviews. Multiple officials emphasized the importance of learning and sharing lessons in their interviews, and the city benefitted from sharing ordinance language, legal interpretations, pilot program structure, and tactics for engaging with the mobility operators. Staff reports frequently referenced the ongoing dockless bike pilot in Seattle as well as emerging pilots in neighboring municipalities, San Francisco, and beyond. Publications from organizations like NACTO were also cited in designing the pilot program. In addition to bilateral engagement with other cities, Santa Monica also hosted a Shared Micro-Mobility with 15 other cities considered leaders to share best practice and future goals.

In addition to sharing knowledge, engagement with other cities led to novel collaborations to improve city’s oversight of shared mobility devices. The clearest case was the creation of the Mobility Data Standard (MDS), an open-source data standard initiated by LADOT but with significant partnership between technical staff in Santa Monica. MDS was a critical evolution for allowing cities to use digital enforcement tools. First, it created a common standard across mobility operators and cities so that city staff no longer had to rely on multiple data formats. Second, it provided real-time access to device locations and usage, allowing cities to digitally track companies’ compliance with fleet size and location. Santa Monica officials not only emphasized the importance of this tool for allowing their pilot to function, but also the importance of collaboration for creating the tool in the first place.

Policy Options Emerge as Companies Mature

Companies may resist making concessions or altering their business model because they are either unable, or simply unwilling to do so. The challenge for cities is knowing the difference. Any regulating body faces a similar dynamic, and this challenge was demonstrated in Santa Monica’s engagement with e-scooter companies. For example, according to several officials, Santa Monica was only able to get Bird to begin scanning driver’s licenses to prevent underage drivers as part of their lawsuit settlement. Similarly, officials were aware of geofencing capabilities by e-scooter providers but were uncertain how effective or feasible the feature was to implement. According to one Santa Monica official, the city became aware of the company’s mature geofencing capability once Lime and Bird shut down their e-scooters for a day during a protest against their potential exclusion from the pilot.

While there is no direct mechanism for overcoming this dilemma, Santa Monica benefitted from a competitive landscape and the aligning incentives through the pilot program structure where greater compliance meant larger fleet sizes. The fierce competition between shared mobility providers meant companies were racing to provide features to differentiate themselves. By including multiple providers, the city incentivized partnership and was even able to reduce

161 Interview with Santa Monica Official, April 27, 2020.
162 Interview with Santa Monica Official, May 6, 2020.
provider’s fleet size in response to any lack of compliance. Cities competing to be on Santa Monica’s streets would only hurt themselves if they failed to implement valuable features.

**Cities Should be Self-Aware How Attractive Their Market Is**

Santa Monica was the birthplace of e-scooters for a reason, and its ideal use case and cultural capital mean it is in high demand in the eyes of operators. However, most cities do not share Santa Monica’s cultural prominence and reputation. City staff mentioned how attractive their city’s market was to operators in several reports, and this knowledge is important for knowing how many concessions they could reasonably demand from operators. This takeaway is important for other cities who are looking to mimic another city’s regulatory regime, as similar requirements may be prohibitively expensive or demanding in less desirable markets.
6. Culver City

Background

Culver City’s stop on the regional light rail E Line (formerly Expo Line) opened in 2012 and was the City’s first major rail connection. Like the rest of the Westside, the city is heavily car dependent as only 6% of Culver City households do not own cars and only 16% of Culver City residents did not drive to work each day as of 2017. As shown in Figure 10 below, the city has several major bike lanes crossing the city but do not have a bike lane network throughout the city, much like most of the other case study cities.

![Figure 11: Map of Bike Lanes in Culver City, 2017](image)

The Arrival of E-Scooters and Policy Actions

*No Major Drop in Culver – E-Scooters Crossing into the City*

Unlike the other cases, Culver City’s initial exposure to e-scooters did not occur in a high-profile, unsolicited, overnight drop-off. While it is unclear when the first shared e-scooter crossed into Culver Cities’ borders, the earliest arrivals were e-scooters placed in nearby Los Angeles neighborhoods. At the first city council meeting to discuss an interim agreement with

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Bird in May of 2018, several council members reported e-scooters were appearing around town and suggested they were arriving from a larger drop-off in the bordering Palms neighborhood. However, there was no documented case of a “rogue launch” like Lime’s sudden appearance in West Hollywood two months earlier.

It is unclear why cities like West Hollywood received a launch of e-scooters while Culver City did not. When e-scooter company officials were asked about their methodology and prioritization of where to launch in 2018, several company representatives emphasized the chaotic internal processes at that time and rapid pace of e-scooter launches. This suggests that the omission of Culver City could either be due to its location being less desirable relative to its Westside peers, or simply an oversight of the companies during hectic early days.

While e-scooters technically arrived in the city prior to formal approval, city leaders did not feel the companies were aggressors who merited a harsh political rebuke. Instead, by May of 2018, Culver City leaders described being aware of the problem in other cities but did not seem to mind the occasional e-scooters crossing into Culver City. Notably, Bird’s government relations staffer, Tim Harter, had already been in communication with councilmembers and attended the early Culver City council meetings. Tim had previously worked on staff for the area’s State Assemblyman, Richard Bloom, and several city representatives spoke highly of their existing relationship with Tim as a reason the city began with a positive relationship with Bird.

The lack of an unannounced drop of e-scooters may have been a key factor in some of Culver City’s political response, which will be detailed in the next section. Overall, the city’s engagement was less politically heated, there was little negative public engagement, and the conversations between the city and shared e-scooter providers was congenial. While it is impossible to know whether the meetings would have been similarly positive in the counterfactual world where a “rogue launch” did occur, several interview subjects expressed their belief the conversations would have been more contentious.

Given the existing relationship between Bird representation and city leadership, conversations between Bird and city staff were initiated with the hope of avoiding the conflict seen in nearby cities. This led to the first official council meetings in May of 2018, where the issue of e-scooters was formally brought before council for consideration.

**Agreeing to an Interim Operating Agreement (IOA) in May 2018**

Culver City’s council first evaluated an e-scooter policy on May 29, 2018. City staff presented an overview of the issue and requested guidance from the city council on how to proceed with their engagement with e-scooter companies. During their presentation, staff focused on explaining existing laws and the pilots being negotiated in neighboring cities like Los

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166 Interviews with Culver City Officials, April 28, 2020, May 12, 2020, June 11, 2020.
Angeles and Santa Monica. During the meeting, staff mentioned they did not agree on an ideal course of action and deferred to council on whether to structure a pilot program.

After the introduction by city staff, public comment ensued. In addition to Bird’s Tim Harter, who called for a pilot program and pitched Bird’s potential value to Culver City, public input was benign and overall positive. While 4 of the 6 public commenters articulated some specific concern like the littering of e-scooters on sidewalks, every resident expressed some degree of support for a pilot program. The lack of vocal citizen outrage made for a calm public meeting compared to the other case study cities.

The enthusiasm for some form of pilot program was evident from council member’s discussion, as every member described a desire to see an e-scooter program take soon as possible. The conversation quickly moved towards structuring an interim operating agreement (IOA) with specific companies like Bird rather than forming a fully designed pilot program. The stated goal for an IOA was to provide staff and participating companies with flexibility as the patterns of Culver City residents’ use was observed. Staff could more quickly set up an IOA with a company instead of having to decide between multiple competing operators who would want to participate in a formal pilot. City council’s goal was to get at least one e-scooter operator legally functioning in the city as soon as possible and to gather data and citizen feedback to inform more long-term decisions. The ability to gather data was also considered a pragmatic necessity considering e-scooter’s arrival in neighboring cities. As councilmember Daniel Lee stated, “if we don’t take any action, we’re still going to have the e-scooters” and thought it best for the city to, “look at the qualitative data after a certain time, then make a decision.”

The rest of the initial meeting was spent clarifying legal distinctions and various policy options such as fleet size and number of operators, but after roughly 30 minutes of council discussion, there was agreement to have staff bring an IOA back to council as soon as possible.

**Finalizing the IOA in July 2018**

After 6 weeks, staff brought council a proposed 6-month IOA with Bird that could be used with other companies as well. The IOA would allow the city manager to enter agreements with Bird and other operators that could be terminated without cause. While staff pushed for a maximum test fleet size of 225 e-scooters split between the participating providers during the trial period, Bird argued for a ‘dynamic cap’ where total number of e-scooter would be based on utilization rates. If existing e-scooters were being ridden frequently, that could be taken as a desire for more e-scooters and the companies would be able to add more to the streets.

After the staff’s presentation, public comment proceeded like the first meeting, as 6 residents expressed varying degrees of support alongside their specific implementation concerns. This time, Lime also sent a representative to make their case for an IOA in Culver City as well.

Council then proceeded to discuss the details of the IOA, and the enthusiasm from several members was palpable. Councilmember Alex Fisch hypothesized small electric vehicles like e-scooters might be, “the first transformative innovation I’ve really seen since the internet …

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168 Culver City Council Meeting, May 29, 2018, 1:55.
really want to give this a true chance.”

A few minutes later, Mayor Thomas Small expressed relief of a perceived answer to the city’s mobility challenges:

"We have worked so hard and spent so much of our precious resources and brains on trying to figure out how to improve mobility. And it has been hard. You know, with all of the consultants we've hired, you know, we haven't really done that much on the ground yet. And here is an opportunity because of this new technology to really to really change the game in terms of how many people get around our town, maybe without a car … whatever we do, I really think we owe it to ourselves to find the way to allow this to have its best shot to really give it a chance to try to work."

While members also expressed concerns about too many e-scooters and equitable distribution throughout the city, there was clear enthusiasm to get an IOA finalized and deploy e-scooters as quickly as possible. Council called Bird’s representative back up for what turned into 30 minutes of questioning about various concerns such as resolving complaints and safety violations. During this time, Bird’s representative emphasized a desire to make Culver City ‘a model’ for other cities and ended by emphasizing the potential for using e-scooter revenue to help fund more bike lanes in the city.

After Bird’s representative sat down, further discussion focused on the total number of e-scooters and operators. There was no consensus, and the council gave the city manager discretion to strike an IOA with Bird and any other operator. They would begin with 200 Bird scooters and adjust the fleet size based on utilization rates. The motion passed unanimously, and Culver City officially kicked off the city’s trial of shared electric scooters.

**Evaluating the IOA – May 2019**

The full council’s discussion on the IOA’s began on May 29, 2019, exactly a year and a day after the council had first heard from Bird and asked staff to develop and IOA as quickly as possible. The initially conceived 6-month IOA’s had been extended to be a full year, and this was the council’s first chance to see a full report on how e-scooters were being used in the city. After nearly 4 hours of other business, the staff presentation began just before 11 PM, and the results were mixed at best. By this point the optimism from the previous year was just a memory as the council assessed what to do with their IOA’s with Bird and Lime.

The most glowing aspects of the report were that the companies were largely in compliance with the city, were paying their fees, and had held a combined 11 public education events. Complaints against the companies dropped radically after the first two months, suggesting increased compliance by the companies and users. The only problem was that rides dropped off dramatically as well. Whereas the city saw an average of 1,000 trips per day from August through November, daily trips hovered around 250 during the last 5 months of the trial. Utilization rates were disappointing as well, as Bird scooters were ridden between 1.4 and 2 times per day, never breaking into the 3-5 range anticipated when the IOA’s were first crafted.

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169 Culver City Council Meeting, July 9, 2018, 4:21.
Lime’s utilization had slowly grown to as high as 4.2, but this was due to deploying as few as 13 e-scooters in the highest-use areas.\(^{171}\)

It was unclear whether this decline was due to the novelty of the scooters wearing off, a seasonal decline in use during the Winter and Spring, or a fundamental inability of the businesses to thrive in Culver City. While the IOA results were less remarkable than the council hoped for, there were still upsides from e-scooters in the city. Staff surveys reported 48% of all e-scooter rides replaced a car tip, suggesting roughly 123 car fewer daily car trips were taken during the 10-month trial.\(^{172}\) Even with their positive impact, it was clear scooters would not revolutionize transit in Culver City. As vice-mayor Meghan Sahli-Wells noted, “how can that be transportation, with so few of them available? To use something as transportation it has to be there.”\(^{173}\)

While the trip data was mixed, the financial data was undecidedly negative. There would be no more suggestions that scooter revenue would finance more bike lanes. Instead, staff calculated e-scooter revenue was only reimbursing 11% of the trial program’s cost to the city, most of which was due to staff time.\(^{174}\) This is not because the companies were negligent. Both Bird and Lime were upholding the terms of the IOA. The financial agreement was simply insufficient to cover the staff time required to create the program, monitor, and enforce the program despite Culver City’s attempts to make their IOA trial as quick and easy as possible to implement.

Councilmembers expressed a much darker sentiment relative to the previous year’s optimism. The negativity was not against the concept of e-scooters, but rather their engagement with the specific companies they’d been in business with. Several members suggested a sense the companies were not responsive, with Mayor Small saying, “they’re just here [in Culver City] to say they’re here, so they can say they’re everywhere.”\(^{175}\) He was echoing a sentiment he had expressed earlier in the meeting, one of being forgotten by the companies. “I share [staff’s] frustration in dealing with these people … they don’t really care about us because we’re a small player, but they care about it symbolically.”\(^{176}\) He argued the companies were only focused on growth and were not providing the type of communication the city desired or expected. He also felt scooter company employees they engaged with were, “mostly young, and they don’t really

\(^{171}\) “Staff Report: Discussion of Options Regarding Standup Electric Scooter-Share Services; and (2) Direction to the City Manager as Deemed Appropriate.” (City of Culver City Transportation and Public Works Department, May 29, 2018), https://culver-city.legistar.com/ViewReport.ashx?M=R&N=TextL5&GID=535&ID=22980&GUID=LATEST&Title=Staff+Report.

\(^{172}\) “City of Culver City Staff Report.”

\(^{173}\) Culver City Council Meeting, May 28, 2018, 4:45.

\(^{174}\) “Staff Report: CC - (1) Discussion of Draft Operating Agreement (OA) for City’s Phase 2 Electric Scooter Share Pilot Program (Phase 2 Pilot Program); (2) Authorization to the City Manager to Finalize and Approve the OA with up to Two Scooter Share Operators; and (3) Other Direction to the City Manager as Deemed Appropriate.” (City of Culver City Transportation Department, March 18, 2020), https://culver-city.legistar.com/ViewReport.ashx?M=R&N=TextL5&GID=535&ID=26455&GUID=LATEST&Title=Staff+Report.

\(^{175}\) Culver City Council Meeting, May 28, 2018, 4:45.

\(^{176}\) Culver City Council Meeting, May 28, 2018, 4:29.
have any equity in the company … so you don’t really know what they’re saying. They often don’t know what they’re saying about their company.\textsuperscript{177}

Small’s comments capture the council’s sense that the companies lacked maturity, not only in personnel but also in their business model. The issue of monetary compensation came up repeatedly during the meeting, as council members worried Bird and Lime might expect some sort of subsidy to operate since neither company was profitable.\textsuperscript{178} Council members repeatedly brought up the idea of seeing which of the many other operators who had approached Culver City might be the most willing to accept a more complementary fee structure that benefitted the city.

\textit{Looking Ahead and Maintaining a Commitment to Shared Mobility Pilots}

The overall conclusion of the meeting was to continue to wait and see what happens. Members noted the constantly shifting nature of the technology and uncertainty of what was to come. Meghan Sahli-Wells captured the sense of uncertainty in noting how, “we’re kind of living in this transitional period where … basically venture capitalists are just, you know, throwing stuff against the wall and seeing what sticks.”\textsuperscript{179} Like her other colleagues, though, she maintained the commitment to continue pushing forward and was glad Culver City was not like, “one of our neighbors that just kind of outright ban them.”\textsuperscript{180} While the first round of IOA’s did not yield a financially sustainable model, the council remained committed to shared micromobility in Culver City and wanted to find the right partner to make it happen.

In March of 2020, the city crafted the next round of IOA’s but by this point the program was understood to be a full-blown pilot. In addition to much more defined program requirements, including standardized data reporting through the Mobility Data Specification (MDS), geofencing, and designated drop zones, the city designed a fee structure designed to recoup 50\% of the city’s operating costs. The rates were modeled after the fee structures implemented by Los Angeles and Santa Monica, which included a 5-figure program participation fee in addition to per-ride reimbursements.\textsuperscript{181} By this point, Lime had left the city and Bird’s extended IOA was set to expire at the end of the month. However, even though the first IOA partners proved rocky, other suitors awaited, as representatives from both Spin and Wheels were present to pitch their company. By this point, the arriving pandemic had become the primary concern of Culver’s leaders, but eventually a new IOA was agreed upon with Wheels and went into effect a few months later.\textsuperscript{182}

\textsuperscript{177} Culver City Council Meeting, May 28, 2018, 4:33.
\textsuperscript{179} Culver City Council Meeting, May 28, 2018, 4:34.
\textsuperscript{180} Culver City Council Meeting, May 28, 2018, 4:34.
\textsuperscript{181} “City of Culver City Staff Report,” March 18, 2020.
Culver City’s Framing and Policy Response

Figure 12: Visualization of Culver City’s Framing and Policy Response

Solution – Helping Culver City Solve the First and Last Mile Problem

As shown in the council’s initial response to e-scooters, the service was perceived as an exciting innovation with the potential to help the city meet their mobility goals, particularly the existing goal of connecting the city’s residents to transit. Council expressed enthusiasm for the services, and while they were aware of the various risks and concerns, they were mostly excited about bringing e-scooters to Culver City in an orderly manner. Even after a year when their relationship with Bird and Lime was not yielding the anticipated returns, the city’s commitment to allowing e-scooters to operate was never in doubt. Rather than questioning whether e-scooters should be banned, the council focused more on which operators to partner with and the appropriate fee structure.

Beyond the presence of jobs and retail, the primary case for Culver City as an e-scooter hub was city leadership’s desire to address the first-last mile problem. Culver City leadership’s focus on the problem was driven in large part by the arrival of the light rail E Line (formerly Expo Line) in 2012, which connects Downtown Los Angeles to the Westside and stops in Culver City. In several interviews with city officials, the E Line’s arrival was noted as a turning point in the City’s thinking, accelerating the need for alternate means of transit that didn’t rely on individual car trips.

Culver City had already invested high profile efforts to improve transit in the city, including a “Transit Oriented Development (TOD) Visioning Study” conducted by several high-profile urban planning consultant organizations in 2017. This process, which cost the city hundreds of thousands of dollars, included eight public workshops, numerous interviews and focus group meetings and an interactive website produced a community-motivated future vision of transit in

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the city that go beyond sole prioritization of personal automobiles. The final report includes plans to reduce traffic, prioritize pedestrians, and create biking infrastructure while maintaining the ‘existing residential neighborhood quality’. The plan focuses on the ‘TOD area’, which is centered on the city’s E Line station and is focused on transit accessibility.

Solving the first last mile problem and improving mobility had been on the forefront of city leadership’s mind for some time, but without much avail. The arrival of e-scooters appeared to be a private sector solution to their needs.

**Gap – In Need of Shared Mobility Pilot Regulations**

As with all cities who sought to craft a new regulation for e-scooters, Culver City’s leadership responded to the arrival of e-scooters as a regulatory gap that needed to be filled. While the city staff faced uncertainty in how to manage shared e-scooters, they did have the benefit of being able to model their earliest policy response on Los Angeles and Santa Monica, as both of those cities encountered e-scooters earlier than Culver City.

Although Culver City did not face the same degree of uncertainty of their neighboring peers who proceeded them, this research considered their framing to also be a Gap as the city’s policy response wrestled with the core questions described as a Gap by Biber et al. within Culver City’s unique context. Furthermore, while Santa Monica and Los Angeles began their e-scooter policy experimentation before Culver City, all three of the cities were still ironing out major questions of how to implement a shared mobility pilot. Specifically, there were major questions around the ideal number of e-scooters, the number of operators, acceptable utilization rates, how to enforce city policy, data reporting requirements, and the financial model required to make the program work. Even though Los Angeles and Santa Monica had already made attempts to answer some of the questions, there answers were experimental, and no one was sure their regulatory model would eliminate the various risks presented by a shared e-scooter program.

While Culver City eventually worked their way into the formal pilot program they currently operate, their initial reaction to e-scooters was primarily focused on testing how e-scooters would work in their city and wanting to quickly test their operation to see what regulations might be required. The uncertainty about the nature and function of their new regulatory regime, even if the regime was based on models being tested by peers, still implies Culver City leadership perceived a gap in how their e-scooter model ought to operate.

**Policy Response – New Reg**

Culver City’s policy response is a clear example of what the Biber framework defines as a New Reg. City leadership’s only focus from the outset was to create a novel policy structure to allow Bird and Lime to operate in the city. When responding to a Gap or Solution, Biber et al. suggests either a New Reg or Free Pass is appropriate depending on whether the new technology’s benefits outweigh the concerns. While Culver City’s leadership was enthusiastic

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about the potential of shared e-scooters, they also verbalized concerns about the technology from the beginning. This balanced perception of e-scooters’ potential aligns with what the Biber framework describes as a ‘neutral’ approach, which calls for a New Reg in response to both a Solution and a Gap framing.

Culver City sought to explore the benefit of e-scooters while minimizing risks through a formal regulatory program, which they accomplished through IOA’s with individual companies rather than establishing a pilot program from the beginning. In the end there were minimal distinctions in the approach from other New Reg pilot programs seen in Santa Monica or Los Angeles. The goal of Culver City’s IOA’s with individual companies appeared to be increased flexibility for staff to change rules and an expedited process that did not require the evaluation of multiple potential e-scooter providers. Whereas Los Angeles and Santa Monica’s pilot programs accepted applications from companies that were then evaluated along set criteria, Culver City immediately chose to work with two companies (Bird and Lime) to get a program working quickly. The city manager was given authority to tweak the program within broad parameters without requiring approval from council, and staff did not have to evaluate multiple providers and would not face undue administrative burden.

In some ways the IOA achieved the city’s goals, as Culver City’s IOA’s were operational only a couple months after council approval. However, it is difficult to say the IOA was not still burdensome to staff time. While the staff avoided the provider selection process that was politically tense in Santa Monica, it still required significant staff commitments. So much so that when council inquired about working with new partners, staff seemed to push against the idea, emphasizing it would take at least 3 months to get an IOA with a new provider up and running.185 While setting up IOA’s with single providers may have been relatively easier compared to the full-blown pilot program, it was no panacea for staff. This may explain why Culver City dropped the distinction between the IOA and pilots when they sought new partners, terming the next program “Phase 2 Scooter Share Pilot Program Operating Agreement (OA)”.

**Takeaways From Culver City**

As a case study, Culver City offers several distinct lessons on the challenges of evaluating a technology in a fast-moving market. In certain regards the city stands apart from the other case studies in this research. Culver City leaders embraced e-scooters with few reservations and little political pushback from residents. Culver City’s experience may be more applicable to most small and medium American cities regarding new technologies. While large metropolises and cultural trend-setters may be the first markets where new technologies are launched, most municipalities are not the target market new companies design their products for. These smaller cities, though, are often clearly aware of their challenges and limitations, just as Culver City had a recognized goal of offering multimodal transit to address the first-last mile issue with the E-Line.

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185 Culver City Council Meeting, May 28, 2018, 4:29.
Relationships and Personalities Matter at the Local Level

Culver City leader’s existing relationship with Bird’s representative, Tim Harter, made a significant impact in their willingness to craft an IOA. The established trust seemed to play a major role in getting the city to act quickly and to feel comfortable creating an IOA initially with Bird as the only provider. While effective relationships can benefit companies, they are also a challenge as growing companies experience staff turnover.

Another lesson from Culver City is the importance of individual personalities within city council. During the initial discussions around the IOA, several members of the council identified themselves as frequent walker or cyclists in a manner meant to reflect their personal embrace of transit options outside of single-occupant cars. While the city may have ensured a similar result even if none of the council biked, it may not have done so with the same enthusiasm in their comments.

Smaller Cities Can Be Less Attractive to Scaling Companies

While Culver City is still within the desirable Westside of Los Angeles and therefore encountered e-scooters earlier than much of the country, relative to the other cases it was one of the smaller cities and may have been less attractive to companies focused on market share. When expressing frustrations with the lack of company responsiveness after a year of the first IOA’s, Mayor Small felt, “they don’t really care about us because we're a small player, but they care about it symbolically.” By ‘symbolic’ caring he meant the companies wanted to be able to say they were in Culver City but were less focused on responding to their day-to-day needs. While it is possible this lack of responsiveness was in part due to the growing pains as the companies rapidly scaled in 2018, Culver City’s frustration makes sense when considering the companies’ incentives. For growth-stage venture-backed companies, the primary consideration is market growth and overall market share. Even if a place like Culver City carries symbolic value, it does not generate as many rides as larger markets.

The attractiveness of a market matters. More attractive places can place higher barriers to entry or demand larger public benefit in exchange for access to their markets than their smaller peers. Less attractive cities are not only less able to place demands on companies, but in certain cases may be even more risk tolerant in the technologies they embrace.

Emerging Technology Practices Move Quicker Than Policies

"It's amazing to see how the evolution of the of the technology is accelerating, because there was so much heat on this just a few months ago. And it went through the cycle, it's gone through cycles so quickly to where we don't know where it is anymore now, and they don't know where it is." – Thomas Small

As Culver Mayor Small describes, the e-scooter market shifted quickly and was challenging to effectively regulate. Even though city leadership aimed to maximize flexibility in their IOA’s, the terms of their agreements were filled with uncertainty and required frequent changes. The
services and financial and administrative capacities of the companies continued to shift as the companies developed. When Culver City first announced their IOA, certain demands like geo-fencing, data reporting through the MDS data structure and integration with the city’s CRM were not yet practiced but would emerge as industry standards within a year. Culver City was able to adjust their program as these changes in practice emerged, but these shifts in the nascent market required additional staff time to evaluate the options. Even choosing the appropriate partner provider was challenging as the market constantly shifted. Between establishing the IOA’s and their evaluation a year later, city staff received inquiries from over 10 e-scooter providers, but not all those providers were still interested in offering the services when Culver City was ready to seek new providers.

Costs to City Staff Time Can Be Significant

Despite Culver City’s best efforts to make their IOA simple and low-cost, it appears the program still required significant effort by staff to implement. Even a year after running their IOA’s staff reported it would take another 3 months to onboard a new company for the IOA’s. Furthermore, the initial IOA’s required new tools to oversee the data reporting, monitoring, and enforcement of the e-scooter providers behavior.

This cost to staff time is to be expected within any change, but Culver City demonstrates the challenges of setting up new programs even when a city can build off the policy models put forth by other municipalities. It also is a significant factor to consider for a city’s finances. City staff conducted a comprehensive analysis of the city’s costs associated with managing the Initial Pilot Program and found the revenue received through this current fee only covers approximately 11% of the actual city’s costs. Embracing a new technology can also mean embracing a new program for city staff to administer, and city leaders should be aware of those costs when evaluating the benefits of a new technology.

The Lack of a “Rogue Launch” and Minimal Resident Concern Simplified City Politics

A significant differentiator between Culver City and the other cases was the lack of a major, unannounced deposit of e-scooters. Even though e-scooters were crossing into the city from Los Angeles borders, no interviewed official expressed the sense that any company had intentionally dumped e-scooters in Culver City. This allowed the relationship to progress much more smoothly and may have also prevented resident pushback that limited council’s options.

Similarly, the early council meetings contrasted with other case cities in the lack of pushback and negative comments. Nearly all the residents who spoke at meetings were in favor of the IOA’s, even if they expressed safety concerns. Several council members expressed their awareness of complaints seen via social media, but those comments and complaints did not overwhelm the positive perception of e-scooters. In the early meetings, many of the supportive residents mentioned they were also members of the city’s Bicycle and Pedestrian Advocacy Committee, which several interview subjects had noted as an important presence in advocating for more mobility infrastructure. Staff’s survey of the public suggested a near even split from the public (53% negative vs 47% positive) while users of the e-scooters were overwhelmingly...

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positive. Negative perceptions existed, but not to the point where council felt pressured to enact a ban. All of this contributed to Culver City experiencing the least amount of political drama, public comment, or type of pushback seen in the other case study cities.

188 “City of Culver City Staff Report,” May 29, 2018.
7. Beverly Hills

Background

Beverly Hills currently does not have any connection to the rail connections, but the Metro Purple (D Line) connecting the Westside to downtown Los Angeles will open two stations in Beverly Hills in 2024 and 2025. As of 2021 the City had roughly 4.1 miles of bike lanes with limited access throughout the City. Several staff described the City as ‘lagging behind’ neighboring cities in regards to bike lanes and emphasized the City’s challenge getting a bike lane approved along Santa Monica Boulevard in 2017. As of 2017, 71% of Beverly Hills residents drive alone to work and 93% of households possess at least one vehicle.

Figure 13: Map of Bike Lanes in Beverly Hills, 2021

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193 “Beverly Hills Complete Streets Plan.”
The Arrival of E-Scooters and Policy Actions

E-Scooters Crossing into the City’s Borders

Unlike Santa Monica, Los Angeles, and West Hollywood, Beverly Hills did not experience a large-scale, overnight deposit of e-scooters in the form of a “rogue launch” pilot. Instead, the city’s experience is most like Culver City, where e-scooters migrated in from neighboring jurisdictions or were deposited in the city by company contractors after overnight charging. However, while Culver City’s leaders did not feel overwhelmed by the device’s slower appearance, Beverly Hill’s leaders expressed the opposite sentiment as the devices appeared in their streets.

While the exact date and number of e-scooters that appeared in Beverly Hills is unknown, the devices had caught the attention of city leadership by the time council responded to the issue in July of 2018. At least several hundred devices had appeared in the city by then, as the Beverly Hills policy had issued 175 citations and warnings to riders on sidewalks and lacking helmets. Given the rapid and growth of e-scooter’s presence in Los Angeles during the Summer of 2018 it is likely the number of devices appearing within Beverly Hills had been accelerating in the months prior to Council action. By July of 2018 Culver City had already struck an agreement with Bird, Santa Monica had approved their pilot program, and L.A. already had pilots operating in individual council districts. Enough e-scooters were being operated in the city, particularly in their luxury shopping district on Rodeo Drive, to merit the attention of City leadership.

The Council Enacts a 6-Month Ban to Restore Order and Send a Message

Beverly Hills city council met to formulate the city’s response to e-scooters on July 24, 2018. Staff presented Council with the decision to either pursue a partnership program like L.A., Santa Monica, or Culver City had recently enacted, or to ban the devices from operating in the City like West Hollywood had just done a month before. After staff gave a presentation outlining the policy options, they foreshadowed and perhaps prompted Council’s subsequent discussion with local news footage showing a group of e-scooter riders who “took over the downtown area” of Beverly Hills and then left the scooters, “strewn and abandoned all over the place” for police to pick up. Multiple staff members recalled expecting a ban to be the likeliest preference of the Council before the meeting even began.

Next up was a half hour of public comment, most of which was residents who wanted enforcement against illegal riding behavior but pushed back against a full ban. Bird’s representative spoke early on and was quick to point out that the perpetrators in the local news video were exclusively on Lime scooters and highlighted the company’s safety campaigns in neighboring jurisdictions. Both Bird and Lime’s representatives emphasized the benefit of a

managed rollout of the devices, but once council discussion began it quickly became clear their pleas fell on deaf ears.

Across both the study session and later formal council meeting the council members each took their turn to flesh out their grievances with the company’s rollout tactics and their concerns about community safety. While council leaders quickly made it clear that they recognized the value in additional mobility options, the e-scooter companies’ launch tactics would not be tolerated within Beverly Hills. Council’s discussion focused on the following key themes, which would prove their foundational framing of the issue far beyond the initial 6-month period.

**E-Scooter Companies’ Launch Tactics Were Unforgiveable**

The primary grievance of the council members was the tactics of the companies’ device launches and their lack of communication with the city. As Councilmember Lester Friedman emphasized, “the fact that this was launched … without any contracts, permits, or business licenses was outrageous.”197 His peers unanimously agreed, and their rhetoric often explicitly blamed the role of the companies in creating the conditions for the eventual ban. Councilmember Lili Bosse told the companies, “we are here tonight because you brought us here. Had you come to us first, we would not be having this discussion … had you come to us first we could have worked together.”198

After city staff confirmed they had indeed not been contacted by the companies, multiple points members articulated a sense of being affronted, perhaps personally, by the companies’ tactics. Then-Mayor Gold stated, “I am beyond offended. Beyond offended by the way this was rolled out” and that the way the companies’ actions exposed cities to potential liability was “unconscionable.”199 Councilmember Bosse ended her previously mentioned statement by describing, “what has happened here is, it’s quite offensive … that’s just not how we have ever worked with anybody.”200

While other cities were also dismayed at e-scooter’s appearing without any consultation with staff, Beverly Hill’s councilmembers’ expression of personal offense was unique in its tone and intensity. One notable encounter during the meetings was with Bird’s regional government representative, Tim Harter, who was asked to justify and explain his company’s past behavior. Harter described Bird’s efforts as attempting to “get the ball moving faster” and “move the needle” for local governments who otherwise would take too long to act when making their policy.201 He then emphasized he was brought in to ‘pump the brakes’ on unexpected launches while also opening up lines of communication with nearby city leaders. Harter’s explanation was not well-received by the Beverly Hills council, and his description of Bird’s actions as attempts to ‘move the needle’ of cities was interpreted as a euphemism for ignoring cities’ wishes. Councilmember Friedman interrupted Harter’s description by saying, “so basically it was a

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197 Beverly Hills City Council Study Session, July 24, 2018, 1:25.  
198 City of Beverly Hills City Council Meeting, July 24, 2018, 33:30.  
199 Beverly Hills City Council Study Session, July 24, 2018, 2:04.  
201 Beverly Hills City Council Meeting, July 24, 2018, 1:16.
business decision that these companies made, and they just wanted to force the hands of the cities.”

Harter’s aphorism stuck with Mayor Gold, who hours later in his closing comments stated, “you wanted to move the needle, well you moved it. Guess what, too far. And I think it is up to cities like us to react to that.”

For Beverly Hill’s leaders, there was no way to justify the arrival of e-scooters without prior city approval. Even Councilmember John Mirisch, the only member to vote against the ban, was upset by the companies’ tactics and spoke of a need to assert city authority and balance power between cities and corporations who depend on and profit from publicly-funded infrastructure.

The Council overwhelmingly felt their city’s residents were harmed by the launch of shared e-scooters, and there would be no discussion of partnership with the companies until they atoned for the harms they had committed. This initial framing was significant, as it may have contributed to the Council’s subsequent demands for companies if they wanted to be in good standing with the city. As the council session carried on it became apparent that council’s demands would be difficult, or perhaps impossible, for any e-scooter company to satisfy.

The Safety Risks of e-Scooters Were Intolerable

The other key theme of the July 24 meeting was the council’s worry that the safety risks of e-scooters in the city were too great for pedestrians and residents. These safety risks only exacerbated Council’s dismay at the companies’ rollout strategies as a harmful risk for the community. But the specific concerns over safety also stood as an individual barrier to e-scooters in Beverly Hills that would persist even as the anger of the rollout subsided over time. The council felt these devices were dangerous, and there were few initiatives the company could announce to persuade them otherwise.

The very first speaker, Councilmember Bob Wunderlich felt that, “safety is the number one issue here” as motivation for his recommendations. Or as Mayor Gold put more bluntly, the companies exhibited “a wanton disregard for public safety … all to make a quick buck.” Mayor Gold’s perspective was shaped by a personal encounter of his a few days earlier. During the council meeting he recounted leaving a coffee shop with the city’s police chief only to have an underage e-scooter rider nearly hit them on the sidewalk. The rider was pursued by a distraught woman who claimed she was nearly run over as well. This concern over safety was also emphasized by the City’s police chief when called upon for comment. She stated that in her experience that most of the riders were riding unsafely, without helmets, often on sidewalks, and that enforcing these behaviors was becoming a burden on the police force.

Between the Police Chief’s comments, the experiences of individual councilmembers, and the video of reckless riders at the Century City mall, the council agreed e-scooter users displayed

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202 Beverly Hills City Council Study Session, July 24, 2018, 1:15.
203 Beverly Hills City Council Meeting, July 24, 2018, 2:05.
204 Beverly Hills City Council Meeting, July 24, 2018, 43:00.
205 Beverly Hills City Council Study Session, July 24, 2018, 00:59.
206 Beverly Hills City Council Study Session, July 24, 2018, 2:05.
207 Beverly Hills City Council Study Session, July 24, 2018, 2:04.
208 Beverly Hills City Council Study Session, July 24, 2018, 16:00.
little regard for the law and would persist in their behavior, and the companies offered no clear enforcement mechanisms to prevent illegal behavior. Rather than blame the users, though, council placed the blame squarely on the companies and their conduct. As Mayor Gold put it, “instead of incarcerating the kids who aren’t wearing the helmets, I’d stick your executives in jail … those are the guys who perpetrated this on us.”

It is difficult to overstate the safety concerns of the Council. Their comments reflected a belief the devices were more than just annoyances but also carried the risk of significant bodily harm. Councilmember Bosse asked her peers to, “imagine just walking on the sidewalk and somebody on a scooter at 15 miles an hour hits you. It can be fatal.” While there may not have been fatalities recorded in Beverly Hills, serious injuries had occurred in the region, such as the young boy requiring jaw surgery in Santa Monica months earlier. There would be no discussion of welcoming e-scooters into the city until the Council’s safety concerns were met.

Willing to Recognize the Potential Value of Shared Mobility

While the result of Beverly Hill’s July meeting was an e-scooter ban, it is important to note the council was willing to admit the potential benefit of shared mobility. This distinction is important for understanding the nuance of the city’s framing. The council did not aim to offer this initial ban as a permanent rejection of all shared devices.

Even the most critical council members articulated the same values other cities championed in their shared mobility programs. Councilmember Friedman stated, “I think it is an excellent attempt to resolve the first and last mile issue, a clean air alternative, and it lowers [our] carbon footprint.” Councilmember Bosse expressed a similar view to emphasize that Beverly Hills was not against innovation. “We are a community that values mobility and a very much forward-thinking vision … you have a council and a city that would support shared mobility, had you come to us first.”

One recurring theme for the Council’s discussion was the idea that shared mobility was a good idea, but they objected to the pace and scale of change caused by the rapidly deploying companies. Mayor Gold, while calling the rollout strategy ‘disgusting’ described the companies’ efforts as a ‘good concept’ that had been corrupted by the pursuit of profit. A similar sentiment was expressed by councilman Wunderlich, who agreed, “all of us would be better off if we had alternative mobility options … that said, I think what is happening has gone out of control.”

If the Council saw shared mobility as a potential good, it begs the question of under what circumstances the council might support companies offering the services in their city. For this set

209 Beverly Hills City Council Meeting, July 24, 2018, 2:05.
210 Beverly Hills City Council Meeting, July 24, 2018, 37:00.
211 Cynthia Renaud, Chief of Police to Santa Monica Mayor and City Council, August 28, 2018.
212 Beverly Hills City Council Study Session, July 24, 2018, 1:25.
214 Beverly Hills City Council Meeting, July 24, 2018, 49:00.
215 Beverly Hills City Council Study Session, July 24, 2018, 59:00.
of meetings, however, that question would only be raised and not answered. The Council’s goal on this day was not to define a vision of future mobility options, but to reject and rebuke the uninvited iteration brought to them by Bird and Lime.

Not only did the council want to express their disapproval of the companies’ rollout tactics and safety risks, but they also wanted to send a message to the companies and other like them that this behavior would be neither welcomed nor tolerated in Beverly Hills.

**Sending a Message and Encourage Alternative Models**

At the end of the meeting, the council motioned to pass a temporary ban with the desire to send a clear message to the companies who launched e-scooters: operating without permission is neither welcomed nor tolerated in Beverly Hills. The council saw the ban as a temporary stance the City would take until more beneficial terms from the companies were ironed out regarding safety measures and enforcement against abuses. In their eyes the ban would incentivize good corporate behavior, forcing companies to tidy up their operations to resume gaining revenue on Beverly Hills’ streets. Or as Councilmember Friedman put it, “we need to be aggressive so that they come to the table.”

As the council debated the ban’s effect, most members considered it a necessary step to incentivize appropriate corporate behavior and assert City authority. As Mayor Gold put it, the ban offered a chance to, “work through the details of how you can demonstrate that you’re actually going to be good citizens.” While Councilmember Friedman considered the arrival of shared mobility to be inevitable, he felt the ban was important for restoring parity with the companies. “I think it is necessary that we do something as disruptive as was done to our community by these devices coming into our city with little to no notice.”

While Councilmember Mirisch agreed with his peers that e-scooter companies had wronged the city, he differed on the implications of how a shared mobility ban would play out. He perceived the ban might have the opposite effect, that it might disincentivize corporate cooperation without reducing unsafe e-scooter rides. He argued people would continue to ride e-scooters into the city, just as they were currently doing without city approval prior to the council meeting. He also thought the companies might not care about the City’s enforcement, “they’ll pay the fee, whatever it is … they’ll release them somewhere else and again they’re not going to be responsible.” Instead, the Councilmember wanted to see “draconian enforcement” and find ways to make the operators eliminate unsafe riding. While Mirisch wanted an agreement with the companies, he wanted it on terms that were beneficial to the City and structured, “to disrupt the skewed relationship between municipal government and corporations not paying their fair shares.”

He argued the companies’, “profits and their multi-billion-dollar valuations” hinged on public infrastructure funded by taxpayers. It would only be just, then, for companies to help fund the city services they depended upon.

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216 Beverly Hills City Council Study Session, July 24, 2018, 1:29.
217 Beverly Hills City Council Meeting, July 24, 2018, 2:05.
218 Beverly Hills City Council Study Session, July 24, 2018, 28:00.
219 Beverly Hills City Council Study Session, July 24, 2018, 2:00.
220 Beverly Hills City Council Study Session, July 24, 2018, 1:55.
221 Beverly Hills City Council Meeting, July 24, 2018, 43:15.
Ultimately Councilmember Mirisch’s concerns were not shared by his colleagues, and he was the lone vote against the ban. The ban’s initial length was set at 6 months, and Council expressed their willingness to shorten the ban if companies and city staff could come to an agreement. In the meanwhile, e-scooters would not be allowed to operate within Beverly Hills, and it was up to city staff to find a way to enforce the new rules.

The First of Several Ban Extensions – December 2018

Nearly 5 months after the initial ban, the city council convened again to decide whether to extend their soon-to-expire ban. This meeting was a quiet affair with only a single public comment and 12 minutes of debate before passing a 12 month ban extension. Once again, the lone no vote was again Councilmember Mirisch who felt the ban would be ineffective in stopping e-scooters from appearing, and his concerns were backed by data. Over the past 6 months city staff had impounded over 1,500 devices, and presumably even more were on the streets but escaped being impounded.222

The other concern was the lack of proposals from companies. Since the ban was enacted staff reported they had heard nothing from either Bird or Lime. The city did have a serious suitor in the form of Spin, a former bike share company recently entering the e-scooter business with a business model based around only launching with cities’ permission. Their representative sent to Beverly Hills, Kyle Rowe, made their case during public comment and received gracious compliments from many council members for appearing and his company’s approach. Yet even with Spin’s softer touch the council was unmoved in their position and unwilling to consider a pilot.

Exploring Why the City Lacked Multiple Suitors

The lack of multiple offers from the larger Bird and Lime presents a puzzle as to why the companies did not try to work with the city and meet the Council’s demands. The most plausible answer may be because Beverly Hills’ e-scooter market was not worth the effort during that time for the larger companies. During the summer and late 2018 the companies were in their period of frenzied growth and were emphasizing gaining market share and launching devices. Furthermore, it appears the major companies were already benefitting from Beverly Hill’s market regardless of the devices not being allowed to enter. As evidenced by the impound numbers, thousands of devices were being ridden into and around Beverly Hill’s from neighboring Los Angeles, all of which generated higher ridership numbers without the hassle of designing bespoke policies to meet the City’s desires.

There was also a legitimate question of whether the Council’s demands were even within reach for the other companies. Per the previous meeting, the council had suggested they wanted to see more generous concessions than their neighbors, including an even revenue split between the companies and cities. This would amount to far more than the companies paid in other cities. Councilmember Mirisch and several other members had also mentioned wanting to see universal helmet usage. However, in the past few months state law had changed to no longer require

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222 City of Beverly Hills City Council Meeting, December 11, 2018.
helmets with the passage of AB-2989, and it would be tricky to require Los Angeles riders to put a helmet on when crossing city lines they may have not even been aware existed.

Spin’s presence demonstrated there was at least one major company looking to work with the city, but there was little incentive to expect a deal to materialize soon. Staff perceived that council’s political demands would be hard to meet and had little reason to craft a program. While the temporary ban may not have led to fewer e-scooters or a productive partnership, the Council could legitimately claim they were acting to get e-scooters off the streets through constant impounds. Until political pressure shifted or a more appealing proposal appeared, there was little reason to change. The ban would persist.

**The Second Yearlong Ban Extension – December 2019**

A year later, the council once again decided to extend the city’s e-scooter ban, only this time several shared mobility companies appeared to plead their case. The Council echoed the previous year’s concerns regarding safety and user compliance and did not seem convinced any progress had been made on those fronts. After an hour of discussion between the Council and company representatives it was clear that Beverly Hill had no interest in shared e-scooters and there was little the companies could do to convince them otherwise.

During 2019 Beverly Hills’ neighbors had continued to embrace shared mobility. Santa Monica had just published their report of their first year estimating their shared mobility pilot had eliminated an estimated 1.3 million car trips. Culver City was designing their second pilot program, and Los Angeles had been seeing over a million monthly permitted rides per month. While neighboring West Hollywood had not yet repealed their ban on e-scooters, dockless shared bicycles were now exempt from the city’s ban as the council sought to expand shared mobility options. Meanwhile, in Beverly Hills the political dynamic had hardly changed from the previous year. City staff were impounding roughly 250 e-scooters a month and the Council still felt the devices were too unsafe or too great a nuisance for their streets.

When the Council gathered this year representatives from the major companies were present to make their appeal. Bird and Spin’s representatives attended the Council meeting and had previously met with city staff and an advisory committee (Lime’s had to cancel at the last minute but was also slated to attend). The Council spent roughly an hour hearing the presentation and quizzing the company representatives about how their services had changed, their safety features, and their ability to ensure users complied with city restrictions. Spin’s presentation featured a slide deck for the city emphasizing their safety features and compliance with municipal laws around the country. Bird’s new representative cited studies demonstrating e-scooters relative safety to other modes of transit. By this point both companies had implemented geofencing to

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223 City of Santa Monica, “Shared Mobility Pilot Program Summary Report.”
225 City of Beverly Hills City Council Meeting, November 5, 2019, 3:47.
prevent riders from straying into forbidden areas, and both had established data sharing protocols with their existing city partners.

While the council appreciated the representatives’ attendance and willingness to answer their many questions, they remained unconvinced the services were appropriate for their city. Mayor Gold argued that any improvements to the companies’ compliance concerns were marginal in addressing the city’s core concerns. He felt, “not sure we’ve answered the questions about safety which drove us in the beginning” and cited a UCLA study emphasizing the likelihood of head injuries among e-scooter riders. In addition to safety concerns, several members felt Beverly Hills’ streets were not suitable for shared devices. The Council had mentioned a lack of infrastructure in the very first council meeting, but this argument took center stage during the later ban extensions. Councilmember Friedman stated, “I agree with my colleagues, the infrastructure in Beverly Hills is just not ready for this, at this point in time.”

Just like in the previous council debates, members articulated the value of e-scooters and stated an openness to their potential inclusion in Beverly Hills. However, their proposed restrictions were either not feasible or were incompatible with the companies’ business models. Councilmember Mirisch referred to shared e-scooters, “more of a fad than the future” before calling for universal helmets and technology to eliminate sidewalk riding. Helmets were no longer required under state law or in neighboring Los Angeles, making a helmet requirement infeasible. As for sidewalk riding, by that point no company had sidewalk detection capabilities to offer. Other Councilmembers proposed restricting service to a small set of streets or a single street, neither of which were compatible with the companies’ operations.

**Biber Framing and Policy Response**

Figure 14: Visualization of Beverly Hills’ Framing and Policy Response

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226 Beverly Hills City Council Meeting, November 5, 2019, 3:52.
228 Beverly Hills City Council Meeting, November 5, 2019, 4:14.
End-Run – The Companies Were Flouting City Rules

The primary Biber framing used by the Beverly Hills’ council was that of an End-Run. As shown in the repeated statements of the council members, particularly in the initial passing of the ban, e-scooter operations and particularly their rollout was seen as an attempt to bypass existing rules and upend city operations. Several councilmembers used the analogy of shared e-scooters as unlicensed vending machines placed on the sidewalk.\(^{229}\) Another member argued the only real innovation in their services was the companies’ willingness to ignore and bypass city regulations by not asking for permission.\(^{230}\) The council felt the companies were avoiding existing rules. Given the council’s concerns about the business operations, they then perceived a ban as the best policy response.

Solution – Mobility Benefits Against Pedestrian Safety

While the Council’s End-Run framing drove the City’s policy response, it is worth mentioning and exploring how elements of a Solution frame interacted with the City’s decision. Aspects of a Solution came up in the Council’s discussion related to increased mobility options. That mindset was secondary, though, to concerns about safety and e-scooters’ negative impact on the City’s pedestrian experience. In addition to Council’s concern, City staff with a focus on transportation perceived the devices as a Solution to the City’s mobility goals.\(^{231}\) However, most of the staff believed the Council majority wanted to enact a ban. Therefore, there was no benefit for staff to pursue a pilot program or well-defined partnerships with companies if the Council was going to continue banning the devices.

Policy Response - Block

Beverly Hill’s policy response in banning the devices was a clear Biber Block, defined as ‘prohibiting the innovator from entering the market’. There is no doubt the Beverly Hills council intended to prevent the e-scooters from entering their market, and in addition to banning the devices they invested public safety resources in giving citations to users and impounding the devices. Eventually the city was also able to have their city boundaries geofenced with the goal of preventing e-scooters from being able to operate in their city, but this implementation was imperfect and required ongoing device impounds. While several councilmembers articulated the specific terms under which they would consider creating New Regs for shared e-scooters, most of the councilmembers remained vague in their guidelines and focused on ensuring the devices were kept out of their city.

Takeaways from Beverly Hills

There was Little Political Pressure to Make E-Scooters Work in Beverly Hills

Unlike other cities, the enthusiasm for e-scooters in Beverly Hills was muted, if present at all. There was little vocal support at council meetings other than a couple enthusiastic residents.

\(^{229}\) First used by Bob Wunderlich, Beverly Hills City Council Study Session, July 24, 2018, 00:59.
\(^{230}\) John Mirisch, Beverly Hills City Council Study Session, July 24, 2018, 1:50.
Every councilmember and staffer interviewed from the city said they perceived most residents were not excited about e-scooters, which reduced any incentive to champion a pilot program. This lack of support along with council’s desire for a ban also meant there was little reason for staff to engage with operators to try and devise a workable pilot. There is little reason to invest time into a project for it to have no chance of turning into policy. Additionally, not only did Beverly Hills lack a clear internal champion of the e-scooter cause, but the city government contained an outspoken critic, Police Chief Sandra Spagnoli. Spagnoli attended most of the major council gatherings on e-scooters to report on enforcement tactics and consistently expressed the view that e-scooters presented a public safety risk for residents and were a burden to enforce for officers.  

**Council’s Perception was Shaped by their Personal Network and Experiences**

A repeated theme among the Beverly Hills council were personal anecdotes and stories based on how councilmember’s peers and social connections encountered electric scooters. Mayor Gold’s resistance stemmed in part from him and the police chief witnessing a teenager almost run over a woman on the sidewalk. Connections to the medical profession also increased perceived safety concerns as Mayor Gold (a licensed M.D.) and Councilmember Friedman (whose son had just completed an emergency room rotation in medical school) referenced the stories they had heard about the frequency of head injuries involving e-scooters. Councilmember Bosse also stated she had a personal friend who was hospitalized after an accident while riding an e-scooter.

Social networks may have also confirmed the councilmember’s impression that shared e-scooters were not desired by the residents of the city. No member mentioned having ridden a scooter and they did not sense that other law-abiding citizens had either. Councilmember Bosse polled her social media followers on their e-scooter views, and she reported the responses were almost universally negative. While there is no representative polling to verify a complete lack of e-scooter enthusiasts among Beverly Hills residents, it appears few of them were vocal members of the city council’s peer group.

**It’s Hard to Pitch a City on a Secondary Goal**

The e-scooter companies arrived in Beverly Hills with a similar message presented to other cities: embrace e-scooters and we can help you reduce emissions and get people out of cars. While every city, Beverly Hills included, supports those goals, not every city prioritizes them in the same way relative to e-scooters’ downsides. As evidenced in the councilmember’s responses, Beverly Hills placed a high priority on their pedestrian experience, a sense of safety on the streets, and preventing any sense of chaos on their sidewalks. These goals were more important

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232 Beverly Hills City Council Meeting, July 24, 2018, 16:00.
233 Beverly Hills City Council Study Session, July 24, 2018, 2:04.
234 Beverly Hills City Council Meeting, November 5, 2019, 4:12:30.
235 Beverly Hills City Council Meeting, November 5, 2019, 4:03.
236 Beverly Hills City Council Meeting, November 5, 2019, 5:30.
than any immediate need to get people onto shared mobility devices, no matter the messaging or lobbying presented by the e-scooter companies.

A recurring theme across interviews with city officials was that a company cannot offer to solve a municipality’s problem unless the municipal leaders agree the problem exists and is a primary goal they are working to solve. It is not enough for a municipality to ‘support mobility options.’ All cities claim that goal. Rather, they must prioritize a goal to the extent they are willing to tolerate the risks inherent to any untested solution. There is little to suggest Beverly Hills leaders prioritized shared mobility as a central goal of city leadership, and unless the City’s goals shift or companies mitigate shared e-scooters’ downsides there is no clear motivation for the City’s policy stance to change.

It is worth noting, though, that Beverly Hills’ mobility goals are undergoing a shift that may elevate the importance of shared mobility. In April 2021 the City passed a Complete Streets Plan that grew out of several years of analysis and community feedback over the future of transportation in the city. This plan emphasizes first-last-mile options for the D Line subway and includes a number of additional bicycle lanes and pedestrian crossings. As of now does not include any changes to the City’s stance towards shared mobility.237

**Banning Providers did not Improve Companies’ Proposal Quality (Yet)**

Even though this research is not an evaluation of the impact of each city’s policy stance, it is worth considering whether Beverly Hill’s Council’s ban achieved the intended response from companies. The Council was clear in their early meetings that they wanted the companies to come back with a proposal for the city that mitigated the Council’s concerns. When the council passed the initial ban, they were curious if 6 months was too long given the chance a company might create an amenable plan sooner. Then, at the meeting to extend the 6 months ban Spin was the only major company present, and while the Council appreciated their genuine interest in Beverly Hill’s concerns it was not enough to overturn the ban. Lime and Bird representatives would later meet with city staff, but they were also unable to get a proposal passed.

It appears the ban had limited results in generating customized solutions from providers. However, in the long term this may not be true. Shared mobility company’s offerings are improving, and e-scooters are gaining features like sidewalk detection technology.238 This is not to say the arrival of new features was directly caused by cities like Beverly Hills banning the devices. However, it is possible that by while bans from cities like Beverly Hills did not immediately result in a flurry of solutions from companies, they may have incentivized the improvement of services to increase the potential markets for these devices to operate in.

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8. Los Angeles

Background

Los Angeles has a vast range of mobility conditions across the city integrating a range of transit options, but this brief background section will focus on the Westside. The Westside’s key rail line is the E Line (formerly Expo Line) running from Downtown Los Angeles to Santa Monica. A heavy rail D Line (formerly the Purple Line) connecting Downtown to Westwood primarily along Wilshire Boulevard is under construction and is expected to be completed in 2027. The city has plans for a “Bicycle Enhanced Network” as part of their Mobility Plan 2035, most of which has already been built within the Westside area and is relatively sparse but consistent with the rest of the city.239 Across Los Angeles, 69% of residents drive alone to work and 88% of households own at least one car as of 2017.240

Figure 15: Map of Bike Lanes on L.A.’s Westside241

239 “Mobility Plan 2035 An Element of the General Plan” (Los Angeles Department of City Planning, September 7, 2016), https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-19728c1d36/Mobility%20Plan%202035.pdf.
**Los Angeles is an Outlier Case**

Among the 5 case studies in this research Los Angeles stands alone in size, complexity, and scope. Each of LA’s 15 Councilmembers represents at least 30,000 more people than the population of the other 4 case cities combined. The city’s unique standing as a major, global city has significant implications for analyzing how the city operates and crafts policies. Given this research’s intentional focus on the Westside, the focus of this case study will be on the parts of Los Angeles within the Westside, namely Council Districts 11 and 5. The experiences of other districts, their constituents, and members will be referred to in so far as they impacted citywide policy. However, the concentration of e-scooters on the Westside and the fact that the Councilmembers for the districts filled two of the three seats on the committee with primary jurisdiction over the shared mobility pilot means even an attempt to tell the citywide story would have an inherent Westside emphasis.

Los Angeles’s vast physical size and topographical variation mirror the city government’s administrative complexity relative to the other case study cities. Whereas the other, smaller cities’ engagement with e-scooters and shared dockless mobility occurred over a handful of council meetings and staff reports, Los Angeles’ debate policy design spanned multiple departments and committees. Not only were the policy decisions diffused across several, large institutions within the city government, but also a greater proportion of the motivating factors are not as readily apparent in the archived discussions of the public bodies. A greater percentage of the city’s motivations and discussions happen ‘below the surface’ rather than hashed out in a single city council meeting between 5 or 7 councilmembers. This case study maintains the same structure and focus on the central questions as the other cases, but at times relies on broader descriptions.

**The Arrival of E-Scooters and Policy Actions**

*The Preceding Dockless Bike Proposal*

It is important to recognize Los Angeles’ policy response to dockless, shared mobility devices was well under way before the e-scooters appeared on the streets, as the Los Angeles Department of Transportation (LADOT) was already crafting and proposing a policy framework for shared, dockless bicycles in 2017. By that point dockless bicycle programs were already present in roughly 30 major cities, and several companies had launched localized pilots in Los Angeles in neighborhoods like the southernmost Harbor District and Griffith Park.

LADOT presented their pilot program and associated report to the city’s Transportation Committee (comprised of 3 of the city’s 15 councilmembers) in December of 2017. The document provided background descriptions of the program and the legal ordinance dockless bike operators would have to abide by to operate in the city. The report also acknowledged the benefit of a privately funded transportation option along with the risks of being unable to guarantee continued service, equity in the distribution of devices across the city, and potential
chaos in the public right-of-way.\textsuperscript{242} When presenting the proposal to the committee, LADOT leadership also acknowledged their core objectives of the program that would remain relevant when e-scooters arrived: real-time data management, scalable enforcement, and maintaining regulatory authority over emerging transportation tech platforms.

Data management was the first and foremost component of LADOT’s goals. Department leadership emphasized the point when discussing Seattle’s dockless bike program, which they were using as their primary model for their own program. LADOT Chief Sustainability Officer Marcel Porras emphasized how Seattle had required data sharing and worked with private researchers to gather and analyze data from bike providers, and that a primary focus of his department was figuring out, “how to engage transportation technology in terms of how we manage data and [perform] the analysis.”\textsuperscript{243} Data had been on LADOT’s mind for some time and was the key focus of their transportation technology strategy developed the previous year.\textsuperscript{244} This strategy, titled “Urban Mobility in a Digital Age,” was premised on preparing for rapid waves of emerging transportation disruptions. The first step in that report was to ‘build a solid data foundation’ with the goal of providing real-time data across the city’s core functions. From LADOT’s perspective, the shared dockless bike pilot represented the perfect chance to improve and test their growing data capabilities with a privately operated mobility service.

The second core feature of LADOT’s proposal was figuring out an enforcement structure for shared devices that was scalable and could be coordinated multiple city departments. The enforcement tools would have to effectively manage hundreds, and eventually thousands of devices on the streets across L.A.’s vast space and ranging topography. Marcel Porras described an ongoing, “feedback loop around the data, the evaluation, and the enforcement.”\textsuperscript{245} LADOT also emphasized the need to integrate the resulting enforcement protocols across multiple departments. LADOT does not have jurisdiction over the city’s sidewalks, that was under the purview of the city’s Bureau of Street Services and Sanitation. If LADOT wanted a successful pilot, they would have to find ways to seamlessly integrate other departments to ensure the city’s sidewalks were not overrun with devices.

Lastly, the final core objective underlying the bike program was LADOT’s desire to maintain regulatory authority over emerging transportation technologies. After Uber, Lyft and other ride-sharing companies emerged in Los Angeles in 2012, LADOT issued cease-and-desist letters to halt their operations. However, California’s Public Utilities Commission subsequently issued regulations for ride-sharing companies as “transportation network companies” (TNC’s) that pre-
emptied city law and prevent LADOT from banning their operation.\textsuperscript{246} While there was no certainty a well-run pilot would eliminate future state pre-emption, LADOT officials mentioned wanting to avoid a similar outcome with shared mobility systems when crafting their pilot.\textsuperscript{247} LADOT General Manager Seleta Reynolds urged the transportation committee to, “remember what happened when companies like Uber and Lyft ... [started] a business on their streets.”\textsuperscript{248} She emphasized that LADOT wanted to be, “very assertive from the beginning about our expectations and about the data that we want” to ensure shared bike providers delivered on their promises.\textsuperscript{249}

LADOT’s dockless bike proposal was structured in a similar manner to Seattle’s program and contained similar elements as the subsequent e-scooter pilot. Several operators would be selected to operate for a year in whichever council districts wanted to participate. Passing the program would minimize the city’s liability for the devices, which was important seeing as they were already present in several city locations. After passing through the Transportation and Public Works Committees, in March of 2018 the full city council unanimously voted to license existing the existing dockless bikes and instructed LADOT to finalize terms their pilot.\textsuperscript{250}

Of course, by early 2018 the shared mobility landscape was shifting underneath the feet of the city. Within a few months shared dockless bikes would no longer be the technology most concerning LADOT. While they may not have anticipated the scale of the coming e-scooter wave, it was certainly on the department’s radar as the dockless bike pilot program passed through City Hall. A month before the full council passage, the presentation of the pilot to the Public Works Committee mentioned that electric scooters were being sighted on the streets of Santa Monica.\textsuperscript{251} Instead of designing the dockless bike program, LADOT had to quickly shift their pilot to incorporate e-scooters into their vision. While the technology and specific terms of the pilot changed, the core goals of data management, scalable enforcement, and maintaining regulatory authority would not. If anything, the boldness of the department’s pilot would only increase to match the scale of the arriving technology.

\textit{The Arrival of E-Scooters in Los Angeles}

E-scooters began appearing on L.A.’s streets almost as soon as Bird began in Santa Monica in 2017, and even more so as the company’s operations scaled in 2018. It is difficult to trace the exact timing and location of the earliest e-scooter appearances in Los Angeles, as they could easily cross from Santa Monica to the bordering Los Angeles neighborhood of Venice. Other launches occurred through the initiation of city councilmembers’ offices, who had their own separate agendas from LADOT. The most prominent case was the office of Councilmember

\textsuperscript{246} Spicer, Eidelman, and Zwick, “Patterns of Local Policy Disruption.”
\textsuperscript{247} Interview with LADOT official, May 19, 2020.
\textsuperscript{248} L.A. Council Transportation Committee, December 13, 2017, 47:45.
\textsuperscript{249} L.A. Council Transportation Committee, December 13, 2017, 48:00.
Buscaino, who represented the 15th council district (CD 15) which is a long, isolated sliver extending from the southern part of the city down to the San Pedro port. According to a representative from the councilmember’s staff, the district agreed to Lime’s proposal of a pilot in the district after a meeting with the company.252

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Figure 16: L.A.’s Council Districts
For CD 15, allowing early access to new technology allows their constituents to receive services and new technology they would otherwise be excluded from. Their staff viewed early pilots as the only chance for the relatively isolated and lower income CD 15 to see technology that would appear in neighborhoods like the richer Westside or denser downtown. Councilmember Buscaino also allowed early access to dockless bikes, and later did the same thing with sidewalk food delivery robots. In addition to gaining early access to novel services, initiating pilot also helps the councilmember be associated with the new technology.

This piloting approach initiated by a councilmember’s office instead of the over-arching LADOT is unique among the case cities and is worth exploring for understanding Los Angeles’ policy dynamics. For LADOT, temporarily allowing council-initiated pilots can be an allowable risk that serves the department agenda as well. First and foremost, to consider is the political dynamics as the LADOT is overseen by the council. While the LADOT’s perfect world might be one of better-defined, citywide rollouts, the department implements the council’s desired policies and would encounter a political cost in vetoing the desires of councilmembers. However, these pilots can also work on behalf of LADOT’s interests in launching new technologies and instigating their need to craft a new regulatory scheme. Once dockless bikes or e-scooters were operating in CD 15 and elsewhere, there was then a need for LADOT to mitigate the city’s liabilities as an argument for a pilot program. Furthermore, the early operation of these devices allows the department to gather data and understand how the technology is used in various areas of the city.

LADOT’s temporary hands-off approach to allowing early e-scooters to arrive meant that by early 2018 there was a growing e-scooter industry presence in the city, albeit only in the council districts that had embraced the technology. By May of 2018 Bird claimed over 2,500 devices were active in the city. The rapid growth of the industry meant LADOT had to act quickly. Tacitly allowing council districts allowed this new technology to be tested in corners of the city, but if the city’s streets became flooded with unregulated e-scooters the situation could quickly grow out of control. The city council had already given LADOT their blessing to craft a pilot for shared bicycles. Now the department had to quickly introduce a pilot that met their existing goals while also keeping pace with these new devices continuing to emerge on the streets.

LADOT responded with an expanded and altered version of their pilot program. This new program would still meet LADOT’s goals of defined data sharing, scalable enforcement measures, and allow the city to maintain regulatory authority. It would also expand to include these new devices and serve as the foundation for all future shared mobility devices the city might encounter. The department’s challenge would now be figuring out a way to implement a program that met the needs of sprawling, diverse Los Angeles while also appeasing the 15 councilmembers who represent it.

Passing L.A.’s Shared Mobility Pilot Program

LADOT shared their proposed pilot program in May and represented a bold implementation of the department’s objectives. The narrow focus on dockless bikes was gone. The report submitted to the Transportation and Public Works Committees instead was a multifaceted implementation based on the core principles laid out in the “Urban Mobility in a Digital Age Report” from two years prior. More than anything the new proposal aimed to be comprehensive to include dockless bikes, e-scooters, and whatever else might arrive in the future. Per the proposal, “the city’s interest is to incorporate new modes quickly and safely in this rapidly innovating space … these guidelines should be flexible … so that the city I snow creating customized and ad hoc regulation for each new private mobility service.”

LADOT’s goal was to create, “a playbook for private companies to operate in Los Angeles.” While many aspects of the proposed pilot were still specific to e-scooters, LADOT ultimately wanted policies and tools that could integrate multiple types of shared devices into a citywide program. To achieve this vision, the city would have to craft policies and tools that could be applied to a range of unknown, future situations. At the center of their proposal was a tool they felt would be critical for all mobility related technology and the backbone of the city’s program, the newly designed Mobility Data Specification (MDS).

MDS and LADOT’s New Data Standard

Whereas the previous dockless bike proposal had outlined the need for data, the newly crafted MDS offered a tangible solution for how data could be formatted, received, and analyzed. In short, MDS was a system for reporting, recording, and readily accessing shared mobility device information in real time and included a data standard fed through a set of APIs the city and providers could access and update. While the MDS code had just been released in a beta version, the vision behind it was broader and went far beyond Los Angeles. LADOT and their partners behind MDS were making the system open-sourced and the code was freely available with the goal of other cities adopting the standard as well. MDS promised to offer all cities a chance to have granular data on what was happening on their streets as it was happening. The department had been working on the vision for some time, but the mobility pilot offered LADOT an, “interesting sandbox to start experimenting” and so LADOT rapidly picked up implementation.

Live data feeds between mobility providers had existed before. Google and the Portland city government had created a data standard for Google maps that could be used for transportation applications, and the General Bikeshare Feed Specification (GBFS) could be used to provide

real-time snapshots of where devices were located.\textsuperscript{260} The problem was that GBFS contained no historical data and did not provide the status of a device and thereby limited the sophistication of a city’s enforcement.\textsuperscript{261} MDS offered the chance for a city to actively manage the fleet of devices within the city, understand the routes being taken, and monitor where shared devices were being parked. All of this was granular real-time information was unprecedented.\textsuperscript{262} LADOT hoped MDS would emerge as the, “industry standard that will make it easier to collaborate, analyze, and share data.”\textsuperscript{263} Use by a critical mass of companies and cities would mean cities could share and receive data all in the same format instead of a piece-meal reporting system.

However exciting the new data standard might be for a technology-focused transportation department, a primary use of the data provided through MDS would be enhanced enforcement across the city. LADOT’s new pilot proposal emphasized how the new data would allow the city to, “evaluate use, parking compliance, and how often the vehicles are taken outside of their home geography.”\textsuperscript{264} In other words, LADOT anticipated their enhanced data feed would also enhance the scope and granular detail of their enforcement capabilities. LADOT officials emphasized their capabilities when responding to the questions of the Transportation Committee and shared how they would be able to monitor fleet deployment and placement across the city as devices were moved by users and the companies.\textsuperscript{265}

In addition to novel enforcement features, the required use of MDS would put the power over data in the hands of LADOT and not the private technology companies. Seleta Reynolds had made her views clear about TNC’s. “These are data companies; they’re building their wealth on a new economic model that is about the collection and sale of data. They’re not mobility companies.”\textsuperscript{266} TNC’s had been notoriously difficult data partners with cities, often only sharing aggregated data weeks or months after the trips occurred, leading to ongoing legal battles with major cities over what data they could require.\textsuperscript{267} Requiring the use of MDS would reset those dynamics with the city in control of exactly what they required and when they wanted to receive it. As Reynolds later put, cities would now be, “earning data instead of asking for data.”\textsuperscript{268}

\textit{Council’s Responses and the Major Changes in the Program}

While MDS would go on to be the most impactful aspect of LA’s e-scooter program for the broader industry, the more immediate concern to city leaders were the core aspects of the pilot’s

\textsuperscript{260} Seleta Reynolds, LADOT to L.A. City Council, May 18, 2018.
\textsuperscript{262} Zipper, “Cities Can See Where You’re Taking That Scooter.”
\textsuperscript{263} Seleta Reynolds, LADOT to L.A. City Council, p. 4, May 18, 2018.
\textsuperscript{264} Seleta Reynolds, LADOT to L.A. City Council, May 18, 2018.
\textsuperscript{266} Los Angeles Transportation Committee, 12/13/17, 45:30. https://lacity.granicus.com/MediaPlayer.php?view_id=46&clip_id=17552
\textsuperscript{267} Zipper, “Cities Can See Where You’re Taking That Scooter.”
size, scope, and placement. Grand visions of municipal data management were of less concern to councilmembers than what would be happening on the streets in their districts. LA’s debate hinged on 4 main program features: the number of devices and providers, their distribution throughout the city, the associated fees and enforcement structure, and how the pilot would impact existing city programs.

Scaling up Fleet Size to Incentivize Equity

The key aspect to LA’s proposed e-scooter pilot was defining the number of devices, providers, and exactly where they could be located. Los Angeles’s vast scale opened a wide range for the potential number of devices, but there was little certainty of exactly how many shared e-scooters would be supported by the market. Predicting the city’s potential was made even more difficult by the frothy enthusiasm around the devices during the summer of 2018 when the first pilot was being designed. E-scooter companies and device enthusiasts argued the technology’s benefit would only increase at scale: more devices would mean fewer cars on the road and lower emissions.

The emerging debate over fleet sizes also intersected with a concern over equity and which neighborhoods would have access to e-scooters. Part of CD 15’s early embrace of the technology was motivated by a concern their lower-income district would otherwise be ignored by the companies. Other districts felt the same, and LADOT struggled to figure out how to encourage companies to seed the entire city with e-scooters instead of crowding their entire fleet allotment on Venice’s beachfront. While e-scooter fleets were booming on the Westside it was unclear if they would be similarly popular in the city’s lower-income southern neighborhoods or deep in the northern, suburban San Fernando Valley.

LADOT’s first proposal sought to tie the issues of fleet size and equitable distribution together. Companies could double their fleet size above the 2,500-device cap by placing devices in “disadvantaged zones”. These zones were identified as census tracts at least in the 75th percentile by a state tool compiling indicators of pollution, environmental quality, and socioeconomic conditions. While the specific device count would be tweaked as the pilot program was debated, this exchange of larger fleets for servicing more parts of the city would remain intact.

This equity incentive structure reflected several of LADOT’s assumptions about what motivated shared mobility providers. After observing other cities LADOT leadership felt it was clear that the companies were motivated by growth, and therefore additional devices was the best way to incentivize the city’s preferred outcomes rather than fines, penalties, or financial enticements. As LADOT’s Reynolds put it, “most of the companies are not price sensitive,” and that their main priorities were, “the size of the fleet and the ability to operate freely throughout

269 Seleta Reynolds, LADOT to L.A. City Council, May 18, 2018.
270 Seleta Reynolds, LADOT to L.A. City Council, May 18, 2018.
L.A. saw other cities’ attempts at fining companies’ into compliance prove futile. Instead, they sought to entice desirable company behavior with the sheer scale of their market.

The expanded fleets in exchange for equitable distribution also reflected the political pressures LADOT faced from council. Namely, there was little opposition to ballooning fleet sizes but significant concern that large swaths of the city would go ignored. The companies had shown themselves to be far more interested in the coastal neighborhoods than other council districts who wanted to also be included. This concern was raised from the very beginning by Councilmember Nury Martinez, who sat on the Transportation Committee alongside the Westside CM’s Mike Bonin and Paul Koretz. CM Martinez’s district in the San Fernando Valley predominantly contains lower-income areas on the edge of the city. “We don’t have any dockless bicycles or fancy scooters in my district … we’re just trying to cross the street without getting killed.”

The other key political factor was that no member sought to limit the potential number of devices and were willing to defer to the administrative decisions of LADOT. Transportation Committee chair Mike Bonin emphasized that he didn’t, “want this committee to be the dockless committee and have to be revisiting this,” for continual adjustments. At a later committee meeting he encouraged companies to support the council giving broad authority to LADOT, that companies were, “better off with DOT managing with some regulatory flexibility … than having to go through an exhaustive council process to change something.”

The main committee of jurisdiction was more interested in giving LADOT the ability to get the pilot going and was less worried about too many devices on the streets. Their lack of articulated concern also suggests a considerable amount of trust in LADOT’s decision-making and their commitment to work with the council to eventually settle on a number of devices that worked for everyone.

By the end, the potential fleet size for the pilot ballooned to over 10,000 devices per provider: 3,000 to start, an additional 2,500 in disadvantaged communities, and another 5,000 devices specifically for disadvantaged communities in the San Fernando Valley. Discretion would also be given to LADOT to adjust fleet size totals based on device ridership and each company’s compliance with city rules. LADOT would also have the authority to decide the appropriate number of companies allowed to operate devices through an application and permitting process. The eventual program would also include an interim condition permit phase

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for up to 3,000 devices per provider to bridge between the councilmember-initiated pilots from before with the upcoming 1-year pilot.276

Designing Scalable Enforcement Protocols

Another core pillar of the program was to ensure the guidelines of the program would be adhered to and that the widespread use of e-scooters would not yield chaos in the public right-of-way. This not only meant a clarification on the acceptable riding and parking requirements of the devices, but also ensuring there were effective enforcement procedures to keep private companies in compliance.

The initial proposal from LADOT was relatively strict on the device’s allowed operation within the city, but council ultimately pushed for relaxing certain usage restrictions. For example, LADOT initially included a ‘lock-to’ requirement that devices be connected to a bike rack at the completion of a trip, but council pushed back in concern the requirement would lead to unintended chaos in corners where there were insufficient bike racks.277 Similarly, LADOT initially proposed a capping of device speeds at 12 mph, which was later raised to 15 mph after feedback from the Public Works Committee.278 This is not to say council lacked any concern over the abuse of devices or the potential for e-scooters to be strewn across sidewalks. Rather, council’s main concerns were addressed in LADOT’s enforcement scheme and clear requirements for keeping devices out of critical areas.

As mentioned during the earlier dockless bike proposal, LADOT was very focused on designing a system for device compliance that integrated the multiple required departments within the city government. Just as before, they saw they key answer in the innovative use of data, this time by leveraging the city’s existing digital 311 system. The typical use of 311 was to provide residents a channel for reporting the need for city services, be it a pothole in need of fixing, or in this case, a cluster of e-scooters left sprawled across a sidewalk. What made LADOT’s proposal innovative was the system would not only be used to communicate from residents to city departments, but also directly link in the private operators.

Every city, regardless of whether they banned e-scooters or not, faced the daunting task of enforcing e-scooter laws. This usually involved some combination of data reporting (eventually through the widespread adoption of MDS) combined with some form of city staff physically combing the streets. The problem was that these tactics could be slow and costly at scale. Cities were left either hiring additional enforcement staff, taking existing public safety personnel away from their other obligations, or in the case of cities like Santa Monica, both. While Los Angeles would still leverage individuals on the street, 311 reports from residents would now go straight to

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operators without requiring any city intervention or additional cost. Additionally, this program would allow the seamless integration across all the L.A. departments with jurisdiction over streets and sidewalks.

The plan for 311 became fully fleshed out in LADOT’s revised e-scooter pilot. After a 311 report, e-scooter operators would be given 2 hours to remove any device reported to be improperly parked, after which the notice would be passed on to the Bureau of Street Services and LA Sanitation for removal. More importantly, the information would be automatically shared with the operators through an API linked to the city’s 311 app, a first for LADOT. The novelty of the 311 API integration helped create confidence in the city’s enforcement, ensured operator transparency, and promised to reduce enforcement costs on the city government. The system came with a dashboard accessible by both the city and operators as the data was automatically routed between all parties in real time.

Finalizing Fees for Providers

Another key aspect of the program was the fee structure, but it did not receive significant debate during the pilot approval. As mentioned in the earlier fleet size debate, LADOT recognized the mobility operators were not price sensitive and they therefore did not view the permit fees as the primary lever for incentivizing company behavior. The earliest iteration of the e-scooter pilot’s fees borrowed from existing dockless bike share programs, was nominal. Companies would pay $500 for their permit, $50 per device, and reimburse the city for any staff time spent responding to the devices. However, as e-scooter pilots began to materialize, other cities like Santa Monica introduced more expensive fee structures and still received robust interest from e-scooter providers. LADOT later proposed fees closer to Santa Monica’s: $20,000 for an annual permit and $130 per device. The city also offered a reduction in the device fee for every device deployed in the city’s equity zones.

Debating the Impact to Existing Programs

The final core aspect debated in LADOT’s proposal was the potential impact of e-scooters and dockless bikes on existing city programs, primarily their partnership with the regional Metro Bike Share. LADOT’s initial proposal sought to ensure dockless devices, “shall not be allowed to directly compete with Metro Bike Share at this time,” and would require geofencing to ensure the devices remained at least 3 miles away from any bike share station. The framing of the program still reflected the mindset that these devices were meant to be a complementary service to LA Metro’s docked bikes.

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283 Seleta Reynolds, LADOT to L.A. City Council, May 18, 2018.
The problem was that by 2018 Metro Bike Share only existed in key markets of the Westside, Downtown, and the Harbor District. Prohibiting competition with a 3-mile geofence would essentially kill dockless mobility in the areas it was most likely to succeed. This program would also interfere with the existing pilot run by CD 15 in the Harbor area and created ambiguity over whether their dockless bike and e-scooter pilot would be allowed to persist. These problems were quickly identified by councilmembers on the committee, and the CD 15’s CM Buscaino even sent a staffer to express their displeasure at the proposed limitations.284

The geofencing was quickly dropped, but it reflected a core dilemma LADOT and other transit departments face when novel technologies threaten to cannibalize existing programs. Even though L.A.’s regional bike share was operated by Metro (which operated across the County), it still was a collaborative program championed by LADOT and their regional partners, and LADOT’s Seleta Reynolds had worked to build out the bike share network across the city. Not only is it difficult for any government agency to supplant their own programs, but there is also reasonable concern about whether the newer private services will provide the same degree of reliability and equitable distribution as public versions. There was no knowing what the state of the dockless mobility market would be in the coming years, and there were worries the private operators might cannibalize public services only to disappear and leave the city worse off than before.

Ultimately, the concerns around cannibalizing Metro Bike Share were dropped. Not only did councilmembers object, but the new program also came to represent more than just a bike share extension. The mobility pilot would be the demonstration project for all future partnerships with private industry looking to launch in Los Angeles, and fulfilling that vision required citywide access and inclusion of the city’s most profitable neighborhoods. Eliminating geofencing would also allow LADOT to push a single policy citywide instead of a patchwork approach that varied by neighborhood or council district. This desire for a singular citywide policy would be valuable in the politics of passing the pilot program and helping it not become mired in carveouts for individual councilmembers.

Passing the Program and Managing Councilmember’s Concerns

The debate and discussion over the program lasted four months and was scattered between the Transportation and Public Works Committee, the full city council, and discussions behind closed doors. While not all the discussion, debate, and councilmember concerns over the pilot program is captured in the public transcripts, the public comments still capture the main issues raised by city leadership.285

The most prominent councilmember navigating the politics of the dockless e-scooter pilot program was Mike Bonin, who not only chaired the Transportation Committee but also represented the Westside neighborhoods bordering Santa Monica where e-scooters were most

284 Los Angeles City Council Transportation Committee, May 23, 2018.
285 Several of the interviewed LA CM staffers and central department staff emphasized that the public council meetings and committee meetings are the ‘tip of the iceberg’ in the public discussion and that the proposal was only brought before council after the major disagreements had been eliminated.
prominent. He responded to e-scooters with a balanced recognition of their value while also wanting to guard against excesses of the industry. His views were perhaps best summarized in a statement where he said, “I think it’s a huge benefit for the environment,” while also hedging that, “we have a lot of different needs to balance and we are not … going to do something that makes everyone happy because we have to balance the needs.”

Bonin’s interest in the devices was tempered by the chaos he witnessed in the Venice neighborhood in his district, where the initial crush of Bird e-scooters became the primary constituent concern for several months. Bonin also established the committee’s willingness to defer to the LADOT leadership and recognized the need for nimble pilot programs. “This is one of those issues that government tends to not do well because the technology moves a lot faster than us … we’re eager to get in as early as we can on this.”

Bonin also advocated broadening the pilot to encompass all emerging technologies, “so that if we get dockless mopeds or hovercraft in the next year, we won’t be scrambling to deal with them.”

Another primary stream of council input was on equitable distribution of e-scooters throughout the city’s more disadvantaged areas, as discussed earlier. Prominent councilmembers in this regard include Nury Martinez, who also sat on the Transportation Committee and encouraged the eventual program for incentivizing larger fleets with more equitable distribution. Another advocate for equitable distribution was Councilmember Curren Price, who amended the program during final passage to ensure LADOT reported on whether the devices in disadvantaged areas that, “does not rollout in communities like mine.”

Lastly, the program did not pass without dissent. The final motion to bring the pilot program into existence received a lone “No” vote from Councilmember Paul Koretz. Koretz represented another wide swath of the Westside bordering Councilmember Bonin’s district, Beverly Hills, West Hollywood, and Culver City. Councilmember Koretz was known to not share neighboring Councilmember Bonin’s interest in dockless mobility, and was unconvinced the devices could be used safely. “Virtually every usage I’ve seen is illegal … and [e-scooters users] are endangering their safety.”

He also questioned whether LADOT’s enforcement mechanisms would prove sufficient, “from my point of view, I haven’t yet seen a way to do this to make it safe.” Councilmember Koretz pushed multiple times to try and exclude his district from the pilot, but was blocked in his attempts as others wanted to make sure the pilot program was a citywide solution.

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287 Interview with a staffer for CM Bonin, May 12, 2020.
289 L.A. Council Transportation Committee, August 8, 2018, 1:11.
290 Los Angeles City Council Meeting, September 21, 2018, 2:15.
293 L.A. Council Transportation Committee, August 8, 2018, 1:05.
294 L.A. Council Transportation Committee, August 8, 2018, 1:10.
Despite Koretz’s opposition, a yearlong pilot program was eventually finalized in October of 2018. Months of council debate and LADOT proposals had finally culminated in a citywide pilot program that advocates hoped would serve as the foundation for all future transportation technology in the city. Now that council had passed the law, they would await LADOT’s quarterly updates to see how their plans translated into reality on the streets.

**Highlights from LADOT Reports and Evaluation of the Pilot**

**Device Count and High Ridership**

The new dockless pilot program received permit applications in December and then began in March of 2019. In between council’s passage of the law and the start of the new program existing operators were able to apply for a conditional permit to maintain devices on the street, and 8 operators were given permission for up to 3,000 devices each. LADOT received 11 applications for the full-year program, and 8 met the criteria to operate. Nearly 20,000 devices were approved under the baseline permit and with an additional 17,000 devices approved to be launched in disadvantaged communities. Notably, despite the e-scooters industry’s continued advocacy to increase or eliminate caps on devices only one operator applied to launch the maximum 10,500 devices, and over the year of the program no operator deployed over 6,000 at any given time. L.A.’s grand ambitions for the total device count proved to be too big for even the device operators.

While the total device count did not live up to expectations, overall ridership after a year demonstrated successful uptake in the city. Over 10.3 million trips were taken during the year and between 9,000 to roughly 18,000 devices were deployed in any given month throughout the city. Usage rates were also relatively promising, between 1.7 and 3.7 trips per vehicle per day. While initial projections in some cities hoped to see numbers consistently between 3-5, even the lowest 1.7 was an increased usage compared to the existing Metro docked bike program.

Lastly, survey data suggested the shared device trips were reducing car usage in the city and increasing mobility options. Among surveyed riders 44% said they drove less often, and the same survey suggested nearly a third of micromobility trips replaced a single-occupant car trip or ride-hail trip. These millions of fewer car trips suggest the program helped lower congestion.

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and reduce traffic. However, the numbers were less impactful for reducing carbon emissions. Per the program review’s calculations, taking the lifecycle manufacturing, charging, and rebalancing of fleets led to only a 5% savings in carbon output (95 metric tons) relative to single car trips. However, it is unclear if the lifecycle carbon emissions of car usage were considered for equal comparison. Also, over a quarter of users reported not having access to a personal car, suggesting the program increased mobility options.301

Safety Statistics and Results

All LADOT’s reports included safety incidents reported by the L.A. Fire Department, with a total of 348 incidents involved shared dockless devices during 2019, but 298 of those collisions involved collisions between e-scooters and cars.302 LADOT’s presentation of the statistics framed the shared mobility safety statistics in relation to accidents involving cars. For example, one report contextualized shared device accidents as equivalent to .01% of all other reported motor vehicle collisions.303 Additionally, LAPD reported 0 e-scooter fatalities in 2019, during which there were 19 cyclist fatalities, 90 vehicle passenger fatalities, and 132 pedestrian fatalities.

Oversaturation in Venice and a Lack of Equitable Distribution

The most glaring shortcoming of the initial pilot was the lack of equitable distribution across the city. This resulted in an overconcentration of devices (and device-related complaints) in neighborhoods like Venice, Downtown, and Hollywood, as well as a lack of service in other parts of the city. To manage the chaos in Venice, in May of 2019 LADOT created the “Venice Special Operations Zone” (VSOZ) to reduce the number of e-scooters and ensure compliance. At one point in July MDS data recorded peak rides in Venice as almost the same as the entire city of Santa Monica, except Santa Monica is nearly 6 times as large.304 The new VSOZ rules restricted the locations and times operators could deploy devices in the zone, limited each operator to 150 devices. Any violation would result in a 7-day suspension from the zone.305 Later on, other neighborhoods such as the Hollywood Walk of Fame were given their own SOZ in response to resident and councilmember pushback.306

The converse problem of too few e-scooters in other parts of the city remained a concern even after a year, and LADOT proposed several changes to improve the outcomes. Instead of the “disadvantaged communities” designation, LADOT unveiled more targeted and smaller zones for deployment based on more fine-grained socioeconomic and transit data. Prices for riding

305 Seleta Reynolds, LADOT to L.A. City Council, August 7, 2019.
would also be capped in low-income zones to make ridership more attractive. Lastly, LADOT proposed requiring any operator that wanted to deploy in the SOZ’s to maintain at least 5% of their fleet in these new disadvantaged zones and committed to exploring novel ways to incentivize operators to deploy across the city.

### 6-Month Extension and Renewal as Annual Permitting Program

While the COVID-19 pandemic disrupted ridership and the finances of micromobility operators, Los Angeles carried on and turned the pilot into an ongoing annual permitting program. After a 6-month extension of the program proposed by LADOT, the city council moved to turn the pilot into a permanent annual permitting program in April, 2021.

### Biber Framing and Policy Response

**Figure 17: Visualization of Los Angeles’ Framing and Policy Response**

As mentioned in the background description of Los Angeles’s structure relative to other case study cities, it is difficult to articulate or demonstrate the competing Biber framework within the complex bureaucracy of Los Angeles. Whereas the city council discussions of other cities can easily represent the competing opinions and concerns of city leadership, L.A.’s framing is diffused among several committees and deferred to LADOT leadership. Also, L.A.’s dockless policy was already in motion when e-scooters arrived, and the framing between the two technologies quickly merged. Ultimately the city is best understood as responding to dockless shared e-scooters with multiple frames with different motivations that all influenced the eventual policy response.

#### Gap – A Lack of Rules and Tools

The Gap framing is perhaps the most prominent in L.A. compared to any other city as LADOT wanted to leverage the pilot program as a foundational permitting program for all future technologies. As one city official commented, any analysis of L.A.’s framing of e-scooters at the time must remember that at the time, many transportation innovations with the potential to

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Not only did 2018 bring about dockless e-scooters, it was also a time when autonomous vehicles, flying cars, and even rapid tunnels were being promised by tech companies in the near future. While the more transformative promises of that time have failed to pan out as projected, it seemed possible at the time that all transportation norms might be quickly upended and L.A. leaders wanted to be prepared.

Of course, the city also recognized their lack of regulations concerning dockless devices. However, unlike other cities that did not previously encounter dockless bicycles, L.A. had already identified the Gap in their ability to manage dockless fleets when bicycles arrived. By the time e-scooters appeared, the city was looking ahead to craft a program for all other technologies as well. As Seleta Reynolds put it, “a lot of what we are trying to do is foundational. Not just for dockless [bikes] and scooters but for managing private actors generally who will want to start businesses in L.A.” This purpose was even reflected by council, as Councilmember Bonin sought to ensure the program could apply to all future technologies, “so that if we get dockless mopeds or dockless hovercrafts in the next year, we won’t be scrambling to deal with them.”

In addition to the Gap in the city’s overarching policy programs, the city also recognized the Gap in their own policy tools for overseeing such a program. LADOT had seen a need for new regulatory tools and flexible technologies for some time, particularly after their 2016 report on Urban Mobility in a Digital Age. E-scooters and shared dockless services were seen as a chance to begin building those tools, and so city leaders framed them as an, “interesting sandbox to start experimenting.” These initiatives were later reflected in the 311 integration and development of MDS, which LADOT viewed as an essential tool with utility far beyond dockless fleet management.

This recognized Gap framing is also useful for understanding LADOT’s emphasis on maintaining regulatory authority. LADOT leaders perceived a lack of tools for actively regulating TNC’s before and wanted to make sure they had all the necessary mechanisms with shared mobility. This is part of why LADOT’s initial policies so heavily emphasized data and justified their approach by referencing TNC’s. Seleta Reynolds used similar reasoning when saying the city needed to be, “very assertive from the beginning about our expectations and about the data that we want,” after calling the audience, “to remember what happened when companies like Uber and Lift did the same thing.”

L.A.’s initial response to dockless companies and e-scooter companies was premised on the notion these companies were looking to operate in the

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313 L.A. Council Transportation Committee, August 8, 2018, 1:10.
314 Interview of Seleta Reynolds by Zipper, “Cities Can See Where You’re Taking That Scooter.”
315 Los Angeles City Council Transportation Committee, 12/13/17, 47:45. https://lacity.granicus.com/MediaPlayer.php?view_id=46&clip_id=17552
same was as TNC’s before them, and therefore the city warily approached them with the intention of ensuring their own policy goals would be met.

**Solution – Sustainability and Transit Goals Set Against Safety Goals**

L.A. leaders also framed the new technology as a solution to the city’s well-known mobility woes. The city had a wide range of goals to reduce single-occupant vehicle use, reduce greenhouse emissions, and increase mobility options across the city. The environmental goals were explicitly cited by Councilmember Bonin when evaluating the pilot program and the promise of reducing car usage was also reflected in LADOT’s proposals.\(^\text{316}\)

The technology was also considered to be a useful way to extend mobility options in neighborhoods lacking many alternatives. LADOT’s embrace of dockless bike share was premised on the possibility of expanding bike services beyond where Metro’s docked stations were, and this framing of dockless amenities was extended to shared e-scooters. Similarly, the many ranging attempts to ensure the devices were deployed throughout the city was premised on the notion that these devices were helpful in neighborhoods that lacked transit alternatives.

Lastly, it is important to note that leaders of the city council and LADOT also recognized the potential for shared e-scooters to work against city goals of ensuring public safety and ensuring respect for the public right-of-way. However, these concerns paled in comparison to cities that banned the technology and did not frequently appear in the L.A. council’s discussions to expand the fleet cap size for operators. LADOT also acknowledged those concerns when they emphasized the need to ensure operators complied with sidewalk regulations. Similarly, early LADOT proposals that were evaluated by the Transportation and Public Works Committees debated the proper sidewalk requirements to ensure the public right-of-way remained usable.

The primary source of safety and right-of-way opposition came from Councilman Koretz when he eventually chose to oppose the program. He stated, “virtually every usage I’ve seen is illegal” and argued the devices posed a threat to public safety.\(^\text{317}\) While other councilmembers were also concerned about safety and LADOT included safety statistics in their quarterly reports on the program, it did not feature prominently elsewhere in council discussion relative to other framings of the technology.

**Policy Response – New Reg**

Los Angeles’ pilot program represented a New Reg, as it was designed and passed as a novel policy program to regulate dockless shared devices and all future on-demand mobility. At no point did LADOT or council consider their legal response to be anything but a new and comprehensive regulatory structure.

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\(^{316}\) L.A. Council Transportation Committee, June 27, 2018.

\(^{317}\) L.A. Council Transportation Committee, August 8, 2018, 1:05.
Takeaways from Los Angeles

*Operational Complexity (and Staff Capacity) is not Linear as City Size Increases*

It is hard to overstate the complexity Los Angeles faced in implementing their e-scooter and shared mobility pilot program. The complexity they faced did not simply scale up in accordance with the size of the city, but also increased in political complexity given the multiple departments with jurisdiction and oversight over the program. LADOT initiatives such as MDS and integration with 311 were not only innovative but also necessary as the city had to figure out ways to manage devices while connecting multiple city departments. The complexity of the city’s regulatory processes and political oversight meant that every aspect of the program had to be scalable and could work as a system instead of relying on individual discretion. Similarly, the companies faced increased difficulty in navigating the city bureaucracy and had to hire several consultants to help them identify how to best engage and persuade the city.318

However, just as the city operations increased in complexity, the increased size also meant the city’s staff capacity also increased in specialization and capacity. LADOT’s leadership and specialty staff were critical in establishing the need for enhanced digital tools but also had the technical capacity to implement solutions. LADOT leaders emphasized the critical role of specialized staff talent in designing MDS and bringing it into reality.319

*Individuals still matter Within Large Institutions*

A key takeaway from the other, smaller case study cities has been the importance of internal champions for pursuing new objectives, but this takeaway also holds true in Los Angeles. LADOT leadership was critical for pursuing a pilot program and asserting the city’s authority over data access. While the city would have presumably still pursued dockless device programs in some form even with different LADOT leadership, it is unlikely the program would have been as large or ambitious. LADOT under Seleta Reynolds had built a clear focus on the use of data and digital tools for creating new tools for regulating emerging technology. The department’s goals had already been articulated and the city had already begun exploring novel data standards prior to when e-scooters arrived. This meant the department was able to use e-scooters as an opportunity to execute their vision, and that vision had already been cultivated by several key individuals in the department.

*Collaboration with Other Cities is Critical*

A consistent theme across interviews with L.A. officials was the emphasis on collaboration and communication with other cities.320 Whether it was collaboration with Santa Monica over their fee structure communicating with other cities, L.A. worked hard to share and receive information. The importance of collaboration was also reflected in the way LADOT made MDS

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318 Interview with a staffer for CD 11, May 12, 2020.
319 Interview with an LADOT official, May 19, 2020.
The collaborative example for data sharing is a useful illustration of the importance of collaboration among cities as a necessary tactic to overcome their lack of market power. Every city represents a small fragment of a company’s market. This asymmetry of power can make it difficult for cities to negotiate terms or assert their regulatory authority, as seen in the lack of data sharing requirements with TNC’s. Information sharing among cities not only helps disseminate best practice but can also allow coordinated activity. A wave of cities quickly adopting MDS shifted the market reality for dockless mobility providers in a way no individual city’s actions could.

**The Analogy of Rideshare/TNC’s Shaped L.A.’s Approach**

It is impossible to understand LADOT’s priorities and goals without understanding how their leadership reflected on the city’s previous engagement with TNC’s. The department’s overriding goal was to maintain regulatory authority and ensure data access, both of which they had lost to TNC’s. The city leaned heavily on the analogy of e-scooters as an extension of the same motives and operating model as TNC’s and responded accordingly.

Every case city used some form of recent technology analogy to understand e-scooters and to guide their subsequent actions. Of course, each analogy comes with its own implications for the appropriate response, and in other cities even the same analogy could be used as justification for opposing legal responses. It is therefore worth exploring which analogies are used by cities and companies and how they relate to policy responses.

**Growth-stage Tech Companies are not Price Sensitive**

A key insight of LADOT leadership was the recognition that growth-stage technology companies with large sums of venture capital money are not price sensitive. Many of the other case cities sought and to incentivize compliance with companies through fees and fines, which are heavily used by municipalities in other settings. Los Angeles instead sought to incentivize equitable distribution throughout the city by increasing companies’ fleet sizes, which they knew was their key motivation at the time. Of course, this form of incentive was only made possible by L.A. councilmembers not being worried about larger fleets in the city. Regardless, this is an important point that cities should consider when weighing how to ensure compliance with well-financed private actors.

Of course, few of the providers maximized their fleet sizes through the incentive program and the glaring deficiency of the first pilot was the lack of distribution in disadvantaged neighborhoods in the city. It remains to be seen what, if any, incentive structures could lead to broader distribution. Notably, many of the on-demand mobility companies are no longer in their

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initial growth phase and have been focused on profitability and unit economics. This reality is reflected in the city’s renewed permit program, which ties direct fee reductions and incentives to device deployment in disadvantaged communities.
9. West Hollywood

Background

West Hollywood is the smallest and densest city among the considered cases, less than two square miles of land concentrated along Santa Monica Boulevard. The city’s density has contributed to it being voted “The Most Walkable City in California” in 2013.\(^{322}\) As of 2015 twice as many West Hollywood residents walk to work as county averages.\(^{323}\) As shown in the Figure 17, the city had limited bicycle lanes, particularly a lack of east-west connections along the length of the city. The city’s 2017 “Pedestrian and Bicycle Mobility Plan” laid out a connected bike network within the city. Lastly, the city is well connected to regional bus systems and does not have any direct connection to regional rail systems, but several stations are being considered as part of Metro’s Crenshaw Northern Extension.\(^{324}\) As of 2017, 74% of West Hollywood residents drive alone to work, and 84% of households own at least one vehicle.\(^{325}\)

Figure 18: Map of Bike Lanes in West Hollywood, 2017\(^{326}\)

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\(^{326}\) “Profile of the City of West Hollywood.”
The Arrival of E-Scooters and Policy Actions

Lime’s First Launch

The first appearance of e-scooters in West Hollywood was brief but impactful. On March 30, 2018, Lime initiated a ‘pop-up pilot’ in the city without prior approval. The city shut down the what they preferred to term a “rogue launch”, and the e-scooters were quickly pulled by the company by April 2. While this was the last of any formal attempts by e-scooters to launch in the city unannounced, the devices continued to appear given West Hollywood’s shared border with Los Angeles neighborhoods popular with shared e-scooter users. Even if only for a weekend, Lime’s launch on the city streets made an impact on West Hollywood residents. Given the city’s high population density and less than 2-square mile area, residents and city leaders were all made aware of the devices, and memory of Lime’s aborted launch persisted beyond that initial weekend.

The unanticipated launch in the city mobilized city staff and leadership into acting, and staff began working to bring a proposal to council. The ordinance would work to establish order and lay the foundation for a citywide pilot program. At the time when West Hollywood staff were drafting the pilot ordinance in the late Spring of 2018, Los Angeles and Santa Monica were finalizing the details of their pilot programs and Culver City was approving an agreement with Bird. West Hollywood staff’s proposal fell along similar lines as their peers in proposing a program that could allow a set number of e-scooters in the city for a temporary period and within structured city guidelines. Staff brought the proposal to council in June, only to discover the city council did not share their view of the future of e-scooters in West Hollywood.

Passing the Initial Ban

On June 18, 2018, the final item on the city council agenda was a staff proposal for governing e-scooters within West Hollywood. The proposal contained 3 elements: explicitly ban shared e-scooters not participating in a city pilot, grant the city transportation committee the authority to establish a pilot program, and instruct council to consider the pilot program on a future date. All three aspects would work to allow the city to mitigate short-term chaos while buying time for a thoughtful pilot that could align with the cities goals and needs. Underlying the recommendation was staff’s assumption that a pilot program of some sort would be the desire of the West Hollywood council and public. The staff presenter informed the council their recommendations were designed, “in preparation [for] the inevitable. We cannot stop these scooters coming to the city.”

The council, however, did not agree on e-scooter’s inevitability in West Hollywood. After brief public comment, including statements from representatives from Lime and Spin, the next 20 minutes of council debate made it quickly clear that there would not be a pilot program.

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anytime soon. Council’s reasons for their opposition varied. Some members emphasized the city’s tight sidewalks, the belief there would be little first-last mile given the lack of major transit hubs in West Hollywood, and the lack of bike lanes and transit infrastructure. In addition to infrastructure concerns, other councilmembers were upset at the company’s launch tactics. The most passionate opposition came from Councilmember John Heilman, who was upset by Lime’s ‘outrageous’ pre-emptive launch. After describing anger at their intentional lack of permitting, he stated that launching without permission, “is just a very bad business tactic and it has actually influenced me to oppose this.”

The council’s concerns were not unanimous, though, as Councilmember John D’Amico expressed support for seeing the city pass a pilot quickly. He argued e-scooters were already, “a non-problematic part of the urban landscape” based on his experiences working in L.A. and Santa Monica, and that the “initial exuberance” of new riders would give way to less chaotic use. He also felt opposition to the e-scooters was driven by a generational divide, likening anger about scooter usage to prior generation’s asking why young people “have to play that rock and roll music?” Despite his embrace of scooters, he was alone in his views, and the council quickly voted 4-1 to accept staff’s ban on e-scooters while killing their motion to design and bring back a pilot.

Immediately after the vote, staff and council entered a confused discussion on how the measure would be implemented. Staff clarified individuals could still cross e-scooters into their city limits. Councilmember D’Amico, who had earlier mentioned the impractical nature of banning e-scooters entering the city, worried the city would now have to deal with e-scooters but, “won’t have a relationship with the businesses to pick them up.” Staff’s lack of immediate clarity on the ban suggests they had not anticipated the council only enacting a ban without the promise of a pilot. Their ordinance banned companies from operating in the city boundaries, but staff did not outline their enforcement mechanisms, presumably because they entered the meeting believing their ban would be a temporary stopgap while a pilot was quickly finalized. What had been an open and shut debate ended on a note of ambiguity and confusion, and staff now had to quickly figure out how to implement their council’s vision.

**Amending the Ban for Implementation**

Three weeks later, the council reconvened on July 18 to consider amendments to their previous ban with clarifications on enforcement. Staff’s new ordinance language not only granted city staff explicit permission to impound scooters, but it also levied a progressive series of fees against companies when they left their scooters in West Hollywood. The first scooter left on city streets by a company would cost them $290, followed by $490 and $890.

Unlike the previous meeting’s calm tone and minimal public input, this meeting included 20 minutes of polarized public comment with most statements arguing against banning the devices.

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332 West Hollywood City Council Meeting, June 18, 2018, 3:40:45.
In addition to residents, representatives from Lime and Bird were present touting their agreements with other cities, the benefits of e-scooter usage, and the importance of making sure West Hollywood was not “a dark spot” as the only municipality in the area to enact a ban.\footnote{333}

Councilmember D’Amico kicked off the council’s discussion and emphasized his continued belief in the futility of the ban and the “unrealizable expectation for this policy.”\footnote{334} He compared the scenario to the city’s ban on Airbnb which ended up being difficult to enforce, worrying that just as with Airbnb, “in 6 months we’re going to be sitting here because we’re going to have scooters everywhere.”\footnote{335} He also reiterated his perception of the issue being a generational divide, that this was the “first time this many people under 35 have shown up for anything” in his 7 years on council. He perceived the turnout as, “a revolution of youth, and I’m hoping that our city is not saying to young people *raises middle finger* … it breaks my heart to think the city is turning its back on young people this way.”\footnote{336}

The other members rearticulated their concerns from the previous meeting, this time taking more time to explain their position to the larger crowd. Councilmember Heilman again expressed resentment at companies operating without city approval, and Councilmember Horvath emphasized a need for improved operating models that allowed for clearer responsibility over the devices. The other resistant councilmembers Duran and Meister focused on the city’s lack of biking infrastructure and smaller sidewalks, saying they’d be open to the devices if the city had more space for them. Councilmember Duran ended by saying that while he anticipated the city would revisit the issue down the road if the city improved biking infrastructure, for now he was content, “[allowing] Santa Monica, San Francisco, and Los Angeles to struggle and get some of the bugs out.”\footnote{337} Beyond the additional statements, the July meeting did not represent any shift in views towards e-scooters. The lines had been drawn the month before, this meeting was simply a chance to align ordinance language with the council’s intention of banning e-scooters from the streets. The new ordinance passed by the same 4-1 vote, and West Hollywood staff was now responsible for fulfilling the council’s goal of no devices on the city streets.

**Implementing the Ban and Storage and Enforcement Issues**

E-scooters were now illegal to operate in West Hollywood, but that did not mean staff was immediately able to implement the new vision. The new law did little for making the public aware they should change behavior. Pedestrians and riders struggled to know where West Hollywood’s boundaries began, let alone the city’s new ordinance language. Staff who were interviewed emphasized the overwhelming challenge of keeping e-scooters out of the city.\footnote{338} Devices continued to stream into the city, frustrating staff in charge of keeping city sidewalks clean.

\footnotesize{333} West Hollywood City Council Meeting, July 9, 2018, 2:02:35.  
\footnotesize{334} West Hollywood City Council Meeting, July 9, 2018, 1:42:58.  
\footnotesize{335} West Hollywood City Council Meeting, July 9, 2018, 1:42:58.  
\footnotesize{336} West Hollywood City Council Meeting, July 9, 2018, 2:04:54.  
\footnotesize{337} West Hollywood City Council Meeting, July 9, 2018, 2:16:55.  
\footnotesize{338} Interviews with West Hollywood City Officials, April 28, 2020, May 4, 2020.}
West Hollywood staff sought to work with Bird and Lime to stem the tide of e-scooters, but the companies’ efforts had little effect or were not fully implemented. A staff report from February 2019 outlines the staff’s many struggles. The companies agreed to inform riders of the city’s boundaries and that e-scooters were not allowed, but staff claimed it had little effect. The city asked the companies to use a geofence to prevent any devices from entering their community, but the companies’ compliance was brief. Staff even put 50 stencils on key intersections to inform riders to stop riding, but by February devices could still be found for rent within city limits.

Staff struggled to get the companies to respond to their complaints, suggesting Bird and Lime simply did not care about the impact of the city’s actions. Over the next several months, 37 scooters were impounded during the twice-a-day code compliance patrols, and just under $15,000 of citations were issued to companies under the fee schedule. Only two of the devices were retrieved by the companies, and storage of impounded devices became an issue for the city. In February the staff had to get approval from council to dispose of their impounded e-scooter collection as it became clear over time the companies had no interest in retrieving their devices. The following month, council passed an additional ‘device storage fee’ of $10 per day to be levied on the companies in the hopes of encouraging them to come pick their scooters up. When asked why the companies were not reclaiming their impounded e-scooters, the staff representative responded, “they just don’t seem to be willing to come and collect them voluntarily, they just don’t. I don’t know how we get around that.”

Figure 19: Scooter Complaints in West Hollywood, 2018-2019

Staff Report to West Hollywood City Council, February 4, 2019.

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341 Staff Report to West Hollywood City Council, February 4, 2019.

342 Staff Report to West Hollywood City Council, February 4, 2019.

It is worth asking why Bird and Lime would indeed care about the city’s impounds and fees. By this time the companies were operating and depositing thousands of e-scooters each day and working to rapidly improve their fleet design. The loss of a few dozen e-scooters would have hardly been noticeable. Also, the fees were insignificant to the company operating costs, even with the additional fees imposed by the city. The city could only charge fees to retrieve their costs, as anything more would be a tax requiring additional approvals. The city was stuck imposing punishments the companies hardly noticed, and the companies felt little incentive to improve a relationship with a city that banned their business operations.

**Searching for a Replacement Bike Share Program**

During the time city staff were figuring out how to keep e-scooters out of West Hollywood, the city was questioning what to do with their failing bike share program. West Hollywood started a docked bike share system in August 2016. ‘WeHo Pedals’ included 150 bikes and 21 stations and was part of an integrated regional bike share program with Beverly Hills, Santa Monica, and the UCLA campus. By all accounts WeHo Pedals was failing to live up to the city’s expectations. The program had low ridership even despite the city promotion offering a discount to new subscribers in August 2018.\(^{344}\) Even worse, the company contracted to operate the bikes had failed to find a corporate sponsor for the program and was operating at a deficit to the cost of the city.\(^{345}\)

In December of 2018 the council instructed staff to end WeHo Pedals and propose replacement bike share options. Staff brought their proposals to the city transportation committee, whose recommendations would then be brought to the council for approval. In January, staff confronted the committee with the reality that any alternatives to a privately owned, dockless system were less popular and less financially appealing. Continuing their WeHo Pedals program was a non-starter, as the council had explicitly required the contract to be terminated. Another public option was the County’s metro bike share program, which would require a city subsidy and hardly promised to be more popular than WeHo Pedals. Pasadena had just cancelled their participation in the program due to high costs and low ridership.\(^{346}\) The committees only remaining options were to work with a private operator or eliminate bike share in the city. Eliminating bike share would work against the city’s climate goals and make West Hollywood “one of the few urban cities to not offer bike share to residents and visitors.”\(^{347}\)

It became clear to the transportation commission that city council’s policy goals of banning dockless shared devices and replacing WeHo Pedals was not achievable. The Council wanted alternatives to their bike share program but opposed any private, shared dockless program. No such alternative existed. After evaluating the various options, the transportation commission

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346 Staff Report to West Hollywood City Council, January 16, 2019.

recommended council initiate a pilot program of private operators of dockless electric bikes in
the city as well as consider the eventual inclusion of e-scooters. Minutes from the committee
discussion note the Commission’s final question how a private dockless bike program was any
different than an e-scooter pilot, to which a staffer replied, “she wasn’t sure.”

* Asking Council to Allow Dockless Bicycles*

In March the commission’s recommendation were brought before council. In short, the
commission was asking council exempt dockless bikes from the ban on shared, dockless devices
they had just passed 8 months prior. Staff began by outlining the transportation commission’s
reasoning and the terms of the dockless bike program. The proposed program would last 18
months, soliciting one vendor to provide 100-300 dockless bikes depending on utilization rates. The
pilot solicitation process and fee structure would mirror those put in place by Santa Monica and
Los Angeles for shared dockless e-bikes and e-scooters. In addition to allowing staff to design
the pilot, the council also had the option of approving multiple vendors or including e-scooters
per the transportation commission’s recommendations. Staff was followed by 15 minutes of
divided public comment and input from Jump (owned by Uber), Lime, and Bird, who expressed
their support and desire to see e-scooters included.

While most of the councilmember’s expressed similar sentiments as when they passed the
previous ban, they were unwilling to overrule their own request for a bike share replacement.
They would agree to the program, but only if it included alterations to meet their persistent
concerns. Despite the commission’s recommendations inclusion of e-scooters was off the table.
The underlying sentiment was that e-scooter operators could not be trusted, “we’ve seen what
happened when the scooters were operating illegally in the city.” The need for a bike share
service persuaded several of the previous ban supporters to let staff operate a pilot.
Councilmember Horvath was open to the program so long as they found, “an operator who is
actually interested in enforcing our laws.”

Council approved the program 3-2, but with certain conditions. Council was still unwilling to
commit to a fully dockless program and amended the ordinance to ask staff to find an operator
that would require users to either return the shared e-bikes to a dock leftover from the previous
bike share program, put the bike on private property, or lock the bike to a bike rack. Staff was
also instructed to ensure whichever company they partnered with had a history of proven
compliance with city ordinances, or as Councilmember Horvath put it, “I don’t want to work
with people who have clearly demonstrated they have no regard for what our policies are.”

* Struggling to Find Dockless Bike Pilot Partners – The First Two CFA’s*

Following the meeting in March in 2019 staff focused on finding a partner for West
Hollywood’s new shared dockless bike program. The only problem was no company was willing

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348 City of West Hollywood Transportation Commission Minutes, 1/16/2019, p. 3
351 West Hollywood City Council Meeting, March 18, 2019, 4:21:06.
to partner. The first Call for Applications (CFA) was released to the public on May 15, 2019 and received no interest from any of the mobility companies.\textsuperscript{352} The main reason was that the program was not actually dockless. Per the city’s CFA, all devices needed to be parked in a designated bike share area defined by the city (many of which would be the previous bike share dock locations), in a public bike rack, or on a location approved by the private property owner.\textsuperscript{353} The chosen operator would also be required to display the parking locations in their app. The city also required each device deposited in the city be given a unique identifying number not being used in any other city at the time. Failure to comply could result reimbursement costs or the loss of a permit, which cost $30,000. The selected company would have additional fees of $210 per device, up to $63,000 if the fleet reached the 300-device maximum.\textsuperscript{354}

Staff responded with a new CFA in August aimed at enticing an operator willing to partner by relaxing financial and operational constraints. The new program was open to not only bikes but also e-scooters and other micromobility devices even though e-scooters were still banned in the city. Per the CFA, “the City has an evolving policy perspective regarding the use of shared mobility devices.”\textsuperscript{355} While the new CFA had the same language about parking requirements, staff signaled a willingness to be flexible and open to operators’ proposals\textsuperscript{356}, cities would have 4 hours to remove poorly placed devices instead of 2, and the stated locking requirement was clarified as a means of making devices stay upright and that the city was open to “alternative measures.”\textsuperscript{357}

In addition to the more relaxed operational standards, the new CFA had a reworked fee structure. Rather than the large upfront cost, selected companies would only pay $80 per device and provide 3% of all fare for trips that start and end within the City boundaries.\textsuperscript{358} This second financial structure reduced the operator’s initial financial risks. Launching a 300-device fleet would now only cost $24,000 up front. Given the small size and layout of the city, a significant portion of trips in the city would begin or end outside the boundaries and not count towards the company’s revenue sharing requirements.

The altered CFA received applications from several companies, though only one of them fit within the terms initially determined by council. Jump applied with the intention of exclusively using pedal assist e-bikes. Bird offered e-bikes but also sought to include and e-scooters and a new class of mopeds. Meanwhile Lime exclusively pitched using e-scooters and new entrant

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\textsuperscript{353} “City of West Hollywood Dockless Electric Bike Share Pilot Program: Call for Applications” (City of West Hollywood, May 29, 2019), https://www.weho.org/home/showpublisheddocument/40409/636935309744870000.
\textsuperscript{354} “West Hollywood Call for Applications.”
\textsuperscript{355} “City of West Hollywood Dockless Electric Bike Share Pilot Program: Call for Applications 2.0” (City of West Hollywood, September 17, 2019), https://www.weho.org/home/showpublisheddocument/41369/637031161937830000.
\textsuperscript{357} “Dockless E-Bike Pilot Program: Call for Applications, Response to Questions” (City of West Hollywood, September 11, 2019), https://www.weho.org/home/showpublisheddocument/41450/637038145293500000.
\textsuperscript{358} “West Hollywood Call for Applications 2.0.”
Wheels offered their moped-like devices, which technically qualified as Class 2 throttle-assist e-bikes, which were also still prohibited under city ordinance.\textsuperscript{359}

It is worth examining staff’s dilemma in resolving council’s guidelines by seeking applications for devices that remained illegal in the city. There is no other instance in the selected case cities where staff requested companies apply for services while they were banned in the city. The most likely explanation is that staff sought to solicit options for council to consider, even if those options had been rejected by the council before. The lack of proposals that met council’s preferences in the first CFA required staff find ways to bring some form of bike share replacement, and relaxing program constraints was a way to induce applications.

\textit{Selecting a Partner, COVID-19 Disruptions, and Final Pilot Approval}

After receiving multiple proposals, staff organized a team to evaluate the various applications and selected Jump and Bird to offer e-bikes. After further interviews with the companies and product demonstrations the pilot was nearing ready for council approval when the first wave of COVID-19 swept through China and disrupted much of the device production. Both Jump and Bird informed the city they would be unable to bring their e-bikes until at least Fall of 2020.\textsuperscript{360} By this point local governments had more significant and pressing concerns than initiating shared mobility pilots as they struggled to respond to the global pandemic.

The issue would not be brought back to council until late 2020, by which point the composition of mobility companies had shifted. Jump had been acquired by Lime and no longer offered the Class 1 e-bikes initially desired by the city. Bird was also unable to offer e-bikes and were only able to offer e-scooters. Meanwhile Lime and Wheels maintained their initial offers of e-scooters and Class 2 e-bikes, respectively.\textsuperscript{361} Pandemic disruptions had also included significant layoffs at many of the companies and reduced market valuations.\textsuperscript{362} West Hollywood’s options were limited, and if the city wanted shared mobility, they would have to change their original instructions to staff.

The pilot program was brought back before the Council almost immediately after the 2020 November election and received complete support. In addition to the shifting market, the West Hollywood City Council had also changed during 2020. Two new members were elected in place of Councilmembers Heilman and Duran, both of whom strongly opposed e-scooters. Whereas the two outgoing members were both over the age of 60 and had served a combined 55 years on the Council, the incoming members Erickson and Shyne were younger at ages 35 and 43, respectively.\textsuperscript{363}

\textsuperscript{359} Staff Report to West Hollywood City Council, December 21, 2020.
\textsuperscript{360} Staff Report to West Hollywood City Council, December 21, 2020.
\textsuperscript{361} Staff Report to West Hollywood City Council, December 21, 2020.
Staff presented recommendations that had been approved by the city’s transportation commission a few months earlier. Staff’s presented council with three main questions: whether to void and reissue new calls for applications, whether to allow e-scooters and Class 2 throttle e-bikes, and whether to allow additional operators into the program. Other than that, the 18-month pilot would maintain the same terms laid out in the second CFA issued over 15 months prior.

While there were 40 minutes of council discussion, the presence of the new supportive members meant there was little debate over whether there would be a new program. In addition to Councilmember D’Amico’s continued enthusiasm for the devices, both Councilmembers Shyne and Erickson expressed emphatic support for the program. Erickson said, “amongst other things I heard on the campaign trail, almost every other person said, ‘please, for the love of God, stop the ban on scooters!’ … literally almost every person would talk about it.” Erickson then went on to describe how he had used the devices the past year when his car broke down and how many of his peers felt similar support for the devices. With the new majority there was no debating whether the new devices would be allowed, only a discussion of how the program would be implemented.

Instead of voiding the applications and looking for new partners, the council opted to work with the remaining providers from the second CFA. This included Bird’s and Lime’s e-scooters as well as Wheels’ Class 2 throttle assist bike. Operators would be brought into the city, staff would begin the program and expand the number of parking stations, and council would be updated with the program’s status every 6 months. The motion passed unanimously, and micromobility was now sanctioned in the West Hollywood.

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**Biber Framing and Policy Response**

**Figure 20: Visualization of West Hollywood’s Framing and Policy Response**

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**End-Run – Lime’s “Rogue Launch”**

The initial response of the West Hollywood Council clearly framed the arrival of e-scooters and shared mobility as an End-Run. The primary concern of the council was the illegal operation of the e-scooters and the lack of any permits for the businesses and their interference with the public right-of-way. One of the strong supporters of the ban, Councilmember Heilman, articulated this framing when describing it, “quite outrageous for a company to know that they don’t have permits to do this.”

While not all the other members who supported the ban cited the same specific concerns as Councilmember Heilman, they shared the sentiment that the companies were operating in an illegal manner.

West Hollywood is the unique case city where the initial framing gave way to an alternative framing, and it is worth considering what occurred for the city to change their perspective. The most plausible explanation is that the use of the End-Run framing became less salient as anger over Lime’s “rogue launch” faded over time. By the later time the city was eliminating their bike share, the major micromobility operators had expanded their outreach efforts and were considered much better partners by the city. It is also important to note that the framing by the council was different from staff, who took broadly shared the Solution framing, as described in the next section. It is possible the End-Run framing was exclusively the view of several councilmembers in the voting Council majority who then let go of that view over time and were eventually replaced on the Council by members who were less critical of the launch of e-scooters.

**Solution – Need for Mobility Options**

The Solution framing was always present in West Hollywood’s response but was delayed in motivating the city’s policy response until later due to the initial ban. Staff’s willingness to present a pilot to the council demonstrated their perception of e-scooters as a Solution for the

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city’s goals. These were the same goals cited later when the city eventually approved the program.

The importance of the loss of bike share cannot be overstated for how the city framed shared mobility and e-scooters. Unlike long-term goals about sustainability and transportation, the need to replace bike share was immediate and tangible. Accessible bike share services were an unquestioned good that the councilmembers had previously supported and funded. Whereas the council had previously been concerned that allowing dockless options might cannibalize their bike share program, dockless mobility then became the only means of ensuring the city maintained some form of shared mobility option. Prior to their elimination of bike share, shared e-scooters were considered an optional service with minor transportation benefits and the source of safety concerns and sidewalk disruption. Once the docked bike share was eliminated, though, shared mobility was pushed by staff as the only unsubsidized mechanism for ensuring West Hollywood did not, “become one of the few urban cities to not offer bike share to residents”.

Like all other case cities leaders doubted whether e-scooters were truly a Solution because of concerns they would actively work against their established goals of safety and maintaining a public right-of-way for pedestrians. Several members were focused on limited sidewalk capacity, and in interviews several members focused on concerns for elderly and disabled residents. Even in the final meeting to approve the pilot, Councilmember Meister’s main concern was to take whatever enforcement steps were required to keep the devices off sidewalks to preserve the pedestrian experience. Ultimately the Solution framing won out, but it is worth noting the use of this frame was not universal even after a shared mobility pilot was approved.

First Policy Response – Initial Block

Within Biber’s framing the initial policy response of the city was clearly a Block. The ordinance passed in the Summer of 2018 was a permanent amendment to the municipal code to ban the operation of unpermitted shared devices throughout the city. While staff intended the ban to be packaged with a permitting program, the council passed the ban without the permit meaning no devices could be parked, activated, or offered within the city. Unlike Beverly Hills, this ban was not introduced with a sunset clause for subsequent evaluation and members did not state the terms under which they required to partner with a company. The ban would remain in place until the city agreed they needed a bike share replacement and market disruptions meant they could only partner with e-scooter companies to provide shared mobility in West Hollywood.

367 Staff Report to West Hollywood City Council, June 18, 2018; City staff across all cities emphasized in interviews that they try and avoid recommending policies when they expect the council will only reject the motion, it is a waste of time and resources.
369 Councilmember Duran, West Hollywood City Council Meeting, July 9, 2018, 2:16; Interview with West Hollywood Councilmember, WH 6 5/6
Second Policy Response – New Reg Pilot Program and Overturning the Ban

The city’s second policy response is a New Reg in line with other cities who crafted a pilot program to evaluate the impact of shared e-scooters in their communities. The new policy was not official law until the end of 2020 and involved overturning the previous ordinance banning all shared dockless devices. As stated previously, this law was in large part a response to shifting market conditions and occurred after city staff determined no Class 1 shared dockless e-bikes were available in the city.

Takeaways from West Hollywood

Policy Decisions are Political, Elected Members Reflect Specific Viewpoints

The political nature of e-scooter policy is best demonstrated in the case of West Hollywood, where the shift of two members on the city council upended the acceptable range of policies in the city. Every Councilmember represents the specific viewpoints of the community that elected them, and this was true of a divisive issue such as e-scooters. The newly elected Councilmember Erickson stated he repeatedly was asked to overturn the e-scooter ban while on the campaign trail, whereas clearly the previous members he replaced did not express any pro-e-scooter pressure when implementing the ban.371

There is also the issue of the age of representation on the Council. This is not to suggest older members are less open to innovation, as West Hollywood was piloting new technology such as sidewalk delivery robots with the same council that banned e-scooters. The age does matter, though, when considering a divisive issue with support broken down largely along age demographics and e-scooter riders tended to be younger.372 Interviews across every city referenced the strongest opposition came from older homeowners while supporters tended to be younger community members. Every councilmember’s perception of the community’s views is influenced by their peer groups and their relationships, and even the most open-minded politician would presumably know more people in a similar stage of life.

Partnership Options are Dictated by the Market

When West Hollywood put out a call for applications for a partner willing to provide as few as 100 Class 1 e-bikes with strict dock-parking requirements and pay a significant up-front permit fee they received zero responses. Even after they relaxed price and operational constraints the City’s potential Class 1 e-bike partners’ supplies were disrupted by the pandemic and no longer available. The cities’ attempts to find a partner to replace their bike share demonstrates that market availability and profitability set the menu cities can order from when partnering with private sector services.

Whichever Historical Analogy Policymaker’s Choose is Critical

372 Both Los Angeles’s and Santa Monica’s pilot program evaluations revealed e-scooter ridership was much more popular among younger riders.
Several analogies were deployed throughout West Hollywood’s debate over e-scooters. The technology was particularly compared to other digital platform companies. Councilmember D’Amico pushed against the council’s ban by recalling their response to Airbnb when the city banned it before re-evaluating their position because the technology’s proliferation.\textsuperscript{373} The same analogy was made to the opposite effect when reminding the Council how Airbnb took rental units off the market as a lesson that new services are not always beneficial for the community.\textsuperscript{374} Put simply, as Councilmember Horvath put it in the same meeting, ‘past is prologue,’ the only question is which past is the Council trying to avoid.\textsuperscript{375}

The city’s ban and then acceptance can be understood as a shift in which analogy the council adopted. The initial ban was a critical view of the newest tech platform looking to profit in cities like ride-hailing or home-sharing platforms. The subsequent support for the program, or at least willingness to let staff pursue it, hinged on viewing shared mobility devices as successors to the beloved bike share program. A common phrase among military scholars is that armies tend to fight the last war, or in other words, prepare for the future as if it will repeat the past.\textsuperscript{376} Perhaps the appropriate, albeit less pithy, corollary for this research is that cities tend to regulate for the previous technological disruption. The framing and response to policy disruptions, then, hinges on which previous disruption is remembered by city councils and staffs. For example, while Bird’s initial positionings itself as the next Uber may have help woo investors, that link made many policymakers recall losing regulatory authority, hard-nosed political tactics, and unexpected traffic in their streets. While Bird may have wanted to inherit Uber’s appeal to venture capitalists, the association was a liability in city halls.

**Narrow Staff Roles Can Limit a City’s Operational Capacity**

The initial responsibility to craft West Hollywood’s response to e-scooters fell to a specific staffer in part because no one else wanted to take charge of the issue.\textsuperscript{377} As several staffers mentioned in their interviews, city staff job descriptions tend to be well-defined upon being hired. When a new issue like shared micromobility arises, then, anyone investing time into the issue must do so in addition to their existing work. Working on e-scooter policies created additional work for staffers, and West Hollywood did not have a dedicated mobility team like Santa Monica did.

City governments, like all bureaucracies, can struggle to respond to new technologies or procedures as there can be no individual or department tasked with a response in their job descriptions. West Hollywood staffers mentioned that progress on mobility solutions hinged on staffers who had an interest in the topic and willingness to move the policy forward. Cities interested in pursuing novel practices and disruptive practices may want to consider which staffers, if any, are given the responsibility and encouragement to take on new tasks and whether they have the resources provided to succeed.

\textsuperscript{373} West Hollywood City Council Meeting, July 9, 2018, 1:42:58.
\textsuperscript{374} West Hollywood City Council Meeting, March 18, 2019, 4:24:30.
\textsuperscript{375} West Hollywood City Council Meeting, March 18, 2019, 4:20:00.
\textsuperscript{377} Interview with West Hollywood City Official, May 4, 2020.
A ‘Progressive’ Identity May Not Mean Early Technology Adoption

In the March 18, 2019, city council debate Councilmember Heilman wanted, “to respond to the comment … that we need to embrace all of these new forms of transportation and all these new apps because otherwise we'll lose our progressive edge. I would just say that just because something is new doesn't necessarily mean it is progressive.” He was responding to multiple e-scooter advocates who encouraged the city to adopt the technology because they wanted to see the city maintain its position as an innovative or progressive city. This exchange demonstrates a lack of clarity on what terms like ‘progressive’ and ‘innovative’ truly mean when it comes to city government’s stances towards emerging technology. Most cities claim to want to be some type of ‘progressive’, ‘forward-thinking’, ‘creative’, or ‘innovative’. However, few would claim following those ideals means blindly adopting whichever technology comes along.

This researcher is not intending to settle which technologies or behaviors qualify as progressive or innovative. The key takeaway, though, is that cities will appeal to their core values (either explicit or implicit) when assessing how to navigate uncertain circumstances. Indeed, both Councilmembers Heilman and D’Amico appealed to the city’s progressive identity when advocating or opposing e-scooters. Therefore, it is important for cities and their leaders to make sure their values are clear, explicit, and agreed upon whenever possible to guide future policy decisions.
10. Themes Across Cases and Lessons for Cities and Companies

Themes Across Case Study Cities

Overall, the selected cases provide several key consistencies despite some variety in their policy responses. Every city considered e-scooters a potential solution to their communities’ transportation needs even if they considered the technology too problematic to. Furthermore, most cities considered there to be a Gap in their existing laws, which required New Regs to define shared mobility devices. Lastly, nearly every city eventually adopted a New Reg in the form of either a pilot program or a direct agreement with shared mobility operators. Beverly Hills was the lone exception. While Beverly Hills is alone among this research’s chosen case studies, they are not alone across the county. Bans were most common policy response among cities in Los Angeles County, however many of those bans were either preemptive or only after temporary exposure to e-scooters. Very few cities that banned e-scooters in Los Angeles County dealt with the ongoing arrival of e-scooters from neighboring cities like Beverly Hills.

Table 4: Summary Chart of Case Study Cities’ Framing and Policy Responses

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One final question when considering cities’ responses is why only some chose to classify e-scooter’s arrival as an End-Run, which Biber defines as when the innovator argues their business model is distinct from incumbent firms and does not warrant the same form of regulation. For these cases, the varied responses hinge on two factors: the initial tactics employed by e-scooter companies and the disposition of city leaders. For example, both Santa Monica and West
Hollywood received citywide launches and used an End-run framing in believing the companies were skirting existing rules. Los Angeles’s large size, on the other hand, meant the initial swell of e-scooters only occurred in specific pockets of the city. Neither Culver City nor Beverly Hills received a single large-scale “rogue launch” deposit. Instead, e-scooters were deposited in smaller numbers or migrated across from Los Angeles and other cities. The difference in response seems to be driven by the makeup of each city council, as Culver City’s leaders were enthusiastic about the technology whereas Beverly Hill’s leaders considered the companies’ actions appalling, demonstrating the importance of personal councilmember’s views. The case of West Hollywood also reinforces the finding that individual dispositions matter, as the changing of two seats on the city council led to a reversal of the city’s framing and policy stance toward e-scooters.

**Synthesizing What Made E-Scooters a Concern**

Like the previous research question, the fourth research question (What features caused e-scooters to become a concern for the case study cities?) is answered throughout the case study results but is concisely consolidated here. This question is important for making a specific diagnosis about the rollout of e-scooters to understand which features are likely to generate strong municipal responses in the future.

There were several unanimous aspects of e-scooters that made them a concern for cities. There was concern about accessibility and control of the public right-of-way, namely sidewalks, concerns about the safety of users and pedestrians, and the way companies launched without permission or licensing from cities. Cities invest significant resources in the planning, designing, and maintaining their right-of-way and do not appreciate unsolicited alterations. Whereas other platform innovations like ridesharing or short-term home rentals subverted municipal laws, they did so within the confines of private property. The use of e-scooters was much more apparent and disruptive in the public realm. Safety concerns were also taken seriously, as cities want to avoid the liability of injuries caused by a service being offered on their sidewalks. Lastly, the lack of prior approval from cities also played a significant role. Nearly every city was upset the companies operated on their streets without an appropriate license or permission. Even Culver City, the only city that did not express anger over the launch of e-scooters recognized the problem of an unlicensed business and in part accelerated their agreement with Bird to ensure a policy structure was in place.

One way to understand the specific features that caused challenges is through the explicit mentioning in interviews with city officials. Below is a chart summarizing some of the major interview themes that appeared. Note that other sources of data impacted the final analysis. For example, while no Culver official noted a concern about e-scooters lacking permission in interviews, it appeared elsewhere.
There are other factors beyond those that appeared as primary interview themes. Equitable distribution of devices was a significant concern for most cities but was more prominent at the scale of Los Angeles than the less-than-2-square-miles West Hollywood. Concern about equity raises an important point for companies claiming to provide public benefit or replace subsidized services like public bike share. Providing public services comes with responsibility to provide to the entirety of a city, not just its most profitable residents.

**The Importance of Rapid Growth**

However, the most problematic aspect of e-scooters rollout was not any specific feature but rather the scale and speed at which the devices proliferated throughout cities. The rapid deployment of hundreds of devices was far beyond what any city would have allowed or anticipated. City officials provided an overwhelming affirmation that the rollout of e-scooters is what caused their greatest concern.

The way in which technology appears is as important as the features of the technology itself. It is important to distinguish how the scale and speed of deployment is a tactical feature of the companies’ business models rather than an inherent feature in the devices. For example, the same technology, offering the same safety and right-of-way challenges could have been deployed in a

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### Table 5: Summary of Major Interview Themes

<table>
<thead>
<tr>
<th>Biber Cat.</th>
<th>Codes</th>
<th>SaMo</th>
<th>CC</th>
<th>BH</th>
<th>LA</th>
<th>WeHo</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-Run</td>
<td>Launched Without Permission</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Companies only cared about profit/growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Uncompliant with city orders</td>
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<td></td>
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<tr>
<td>Gap</td>
<td>Needed a new regulatory structure</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Novel data or staff responsibilities</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Solution (+)</td>
<td>Provides new, sustainable mobility</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>Addresses first-last-mile problem</td>
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<tr>
<td></td>
<td>Helps us be an innovative city</td>
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<tr>
<td></td>
<td>Replaces or expands bikeshare program</td>
<td></td>
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<tr>
<td>Solution (-)</td>
<td>Risks our pedestrians and sidewalk access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creates public safety concerns</td>
<td></td>
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</tbody>
</table>

*Single Person = [ ]*  
*Multiple People = [ ]*
slower, more methodical manner and only after a city approved the operation. Critics of e-scooters would consider the rapid deployment a profit-seeking gambit at the risk of public safety. Supporters would consider it a necessary means of forcing slow-moving cities to act quickly.

There is no easy resolution to the debate of whether technologies should ever scale without prior approval or permission. Cities cannot be blamed for failing to accommodate every newly minted tech ‘solution’ to urban problems as soon as they are deployed. There are critical liability, safety, and equity concerns of public welfare that the private sector often fails to accommodate on their own. However, it is also worth examining how cities incorporate new technologies and whether they provide adequate opportunities to test new ideas. Entrepreneurs wanting to bring new ideas to a city with potential public benefit may find the process of appealing to every concern of municipal leaders too time-consuming and instead choose to bypass the system. These case studies demonstrate the importance of identifying strategies cities can adopt to allow new technologies to be evaluated in a way that still incentivizes the creation of new, exciting ideas.

**Limitations of the Biber Framework**

There are several observations when analyzing the Biber categorizations of each city’s actions. Only two types of policy response are used (Block and New Reg) and the Exemption framing is never used. Much of this is due to the lack of existing e-scooter regulations (preventing an Old Reg) and cities’ refusal to allow e-scooters to remain on public sidewalks once they appeared at scale (eliminating a Free Pass). There were then few alternative measures to either banning e-scooters or creating some form of new pilot program. As for the lack of an exemption framing, Biber’s definition of an Exemption occurs when the innovator finds a legitimate, unanticipated loophole that allow it to bypass existing laws for incumbent operators. This category did not apply as neither the e-scooter operators nor cities argued there were a legitimate loophole that would allow shared e-scooters to operate in the public right-of-way.

Several of the classifications were edge cases worth noting that demonstrate the limitations of the Biber Framework for defining ongoing policy decisions that do not neatly fit into categories. The first is the argument of whether Santa Monica temporarily deployed an Old Reg response when initially requiring Bird to receive vending licenses. This application was because there was no definition of shared mobility in the city’s codebook and vending code was the closest parallel of a private operation in the public right-of-way. The reason this action was not considered a formal response because it was an interim stance initiated by city staff without council approval. Within this research policy responses were only considered official once they were adopted by council and agreed upon throughout city government. Any time a city changed their position over time or were divided on their policy presented a challenge for Biber classification.

Another debatable decision was defining Beverly Hills’ as using a Solution framing even though they only ever enacted a ban. This means the city has a framing that did not contribute to their final response, which is unique among all the case study cities. Based on interviews with Beverly Hills officials and city council meetings this researcher considers that city leadership did
acknowledge e-scooters and shared micromobility as a solution, even though it did motivate their final policy outcome. However, Beverly Hills officials were sincere in their willingness to consider e-scooters. The city repeatedly took meetings with companies in good faith, they just were unable to find an agreement that worked for both parties.

One final debatable classification was whether to include the use of a Gap framing in West Hollywood’s second policy response, as the lack of a Gap classification makes them the only city that passed a New Reg without a Gap framing. The reason this framing was excluded was because the definition of a Gap required the technology to not be accounted for in a city’s existing regulations. Even though West Hollywood changed their position, their initial defined and formally acknowledged e-scooters and thereby eliminated the Gap in their laws.

Overall, the Biber Framework was a very helpful tool for describing, classifying, and analyzing each city’s actions. However, like any framework, it does not fully capture all the factors that contribute to a policy decision, especially when exclusively considering the case of cities. For example, many city decisions came down to the perception of key decisionmakers or the most recent technological analogy cities used. Also, the way policy decisions are iterative and made over time and do not neatly map into a clearly-defined framing and response. Lastly, every case study involved the use of multiple, competing Biber frames for how to best understand the technology, which does not clarify how a city ought to then act. Municipal governments also typically face unique constraints such as internal politics or a lack of city staff capacity.

Considerations for Cities When Responding to Novel Technologies: Lessons from E-Scooters

The final research question of this project asks what insights can help improve existing frameworks and guide how cities respond to future innovations. This project has focused on and used Biber et al.’s descriptive framework with the belief it is the most useful tool for describing and categorizing policy responses to new technologies. Rather than try and update the Biber Framework or extend it beyond its intended purpose, the following section synthesizes several lessons from e-scooters into a simplified, actionable list. The goal of this section is to provide guidance and recommendations for city leaders deciding what to do in the face of novel, technology-driven policy disruptions based on the lessons from e-scooters, broken down into 6 listed steps.

These lessons are also meant to be complementary to existing knowledge and best practice for municipal government. City leaders are drowning in best practice manuals for technology procurement, program evaluation, and how to operate city programs. The following steps aim to provide foundational questions for whenever the next new thing arrives. Specifically, this advice is intended for specific constraints when:

- The technology or service being considered is novel
- The market, players, and technologies are shifting and unstable
- The service of concern appeared quickly and is rapidly scaling

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- The outcomes are uncertain, untested, and impossible to easily model in the manner of a typical cost/benefit analysis

**Step #1: Evaluate whether your city has regulatory authority over the new technology or business operation.**

A city’s first consideration should be to establish the boundaries of its authority and the range of policy options it has when crafting a policy response. In other words, what choice does your city have in its response? If a city lacks authority or faces the threat of preemption from the state, there is little to do other than abide by external legal restrictions. Regulatory authority may be unclear or ambiguous when a novel practice first emerges. For example, Santa Monica’s first attempt to enforce sidewalk rules involved classifying shared e-scooters under vending laws until shared micromobility devices were later defined in the city codebook. Another reason this consideration comes first is because the answer may determine a city’s policy strategy. Los Angeles’s response was guided by the desire to retain authority and not lose the ability to regulate shared mobility providers and require greater data access than was made available by TNC’s.

Before jumping to a decision about choosing between policy options, stepping back and examining legal limits is useful for considering options that may not immediately present themselves. There may be cases where new technologies can be managed by existing policy frameworks, just how Seattle’s shared dockless bike program provided the model for shared e-scooter policies. However, cities should not rush to assume the ideal policy already exists and should first take a step back to establish their options.

**Step #2: Identify which of your city’s existing goals the innovation might benefit or harm**

Every decision to embrace or reject an emerging technology is a wager on the unforeseen impact to your city. Whereas other city government actions involve known investments with well-defined outcomes, it is impossible to know the concrete outcomes of untested technologies. Therefore, a city should begin by articulating which of its goals a technology may help meet and which goals it may put at risk. Ideally these goals have already been defined and agreed upon as part of a city’s long-term planning. For example, cities facing e-scooters often pitted their goals for mobility, transportation, innovation, and emissions against goals for pedestrian experience, right-of-way accessibility, and safety.

Articulating the relevant goals does not simplify the problem cities face. They still must make difficult decisions. But clear goals can serve as the foundation for how to analyze whether an innovation makes sense for their community. Framing the debate in terms of existing goals can also focus the conversation on agreed-upon principles rather than personal feelings about an innovation. Even though those goals may not be perfectly measured, it can help clarify what types of outcomes the city is pursuing when they eventually evaluate the technology.

For example, Culver City had a clearly defined set of mobility goals, specifically a goal of creating first-last-mile connections with their E-line stop. When the city evaluated their agreements with micromobility providers a year later they could point back to their agreed-upon
goals as a clear standard. Even though city leaders were disappointed by the companies’ level of engagement and the lack of uptake of e-scooters across the city, they still perceived a benefit to the devices in providing first-last-mile solutions for some residents and chose to continue their program. Also, Beverly Hills had an existing goal of maintaining a high-quality pedestrian experience, particularly in their luxury shopping district. This gave them a clear justification of why they were unwilling to consider later pilot programs so long as they could not guarantee

**Step #3: Evaluate the state of the market, the potential for partnership with companies, and the attractiveness of your city**

No two cities are the same in the eyes of private companies, and cities need to have an awareness of how they rank relative to their peers. Cities cannot expect to all be treated the same in the eyes of corporate partners and need to understand what they can demand before they enter negotiations. For example, Santa Monica had unique status as being not only the first market for the devices, but also was a well-known, tourist destination. In some ways Santa Monica became the early “poster-child” for the technology that companies would point to as an aspirational example for other cities. Some of the other cities like Culver City, for example, were not as attractive to companies. Culver City had a much smaller population and was less of a destination for e-scooter operation. Whereas Santa Monica had continued engagement from e-scooter providers and was able to demand funding for bike lanes, Culver City expressed frustration at the degree of engagement they received from companies.

Understanding the market dynamics can also help a city make informed policies that account for companies’ core priorities. For example, Los Angeles was aware that growth-stage companies with large amounts of liquid venture capital were not price sensitive. Instead of trying to encourage equitable device distribution through fees or financial incentives, it instead used higher fleet caps to encourage companies knowing that large fleet sizes were important in the early growth period. While this incentive did not have the desired effects in its first implementation, the city has adjusted their approach in their second permitting round. Conversely, West Hollywood and Beverly Hills had to learn about the companies’ lack of price sensitivity the hard way when companies refused to pick up their impounded e-scooters and did not care about the fines being levied by the cities.

**Step #4: Determine the extent your city can enforce and verify any policy proposals**

Before evaluating the tradeoffs of different policies, cities should consider the extent various policy options are enforceable and the extent they can verify and measure their desired outcomes. All the case study cities that allowed e-scooters emphasized the centrality of data accessibility, which allowed them to verify their policies were working and companies were compliant. While certain policy options might be politically easier to pass or be motivated by good intentions, passing a law that cannot be verified or implemented is a recipe for future frustration.

For example, West Hollywood and Beverly Hills banned e-scooters, but the city faced significant frustration, especially at the beginning, in enforcing their laws and keeping devices off their streets. This is not to say the bans were the wrong policies for the cities. However, the
cities did not fully anticipate the costs and challenges of initial enforcement when passing their policies, which led to future headaches. One example was how West Hollywood’s city staff had to get council permission to dispose of impounded e-scooters once they learned the companies had no interest in collecting their devices. It is possible cities these cities may have made the exact same policy choice even if fully aware of the implementation challenges. However, cities would benefit from tempering their expectation of a policy’s success with whatever likelihood there is of a policy being fully enforced.

A similar example played out in the cities that piloted shared e-scooters as cities had to figure out what they were capable of requiring from companies. At one point Los Angeles considering including a ‘lock-to’ requirement that devices be attached to a fixed object when parked, but there was uncertainty over how that requirement could be enforced. Nearly every city had the desire to require some limitations on where e-scooters could be ridden or where they could operate that was impossible to fully enforce, even with geofencing. Even fleet caps were difficult to monitor throughout the day until MDS was commonplace.

**Step #5: Structure an Agreement to Validate the Proposed Benefits and Risks of a Technology**

Even after implementing all the previous considerations, there will always be significant uncertainty about an innovation’s impact on a community. Once a city has decided to introduce (or simply not ban) a new technology, the city should focus on making an agreement that validates the promised benefit of a technology and minimizes its harms. For most cities that embraced shared micromobility, this meant some form of pilot period where multiple operators were allowed to temporarily introduce fleets of their devices (Culver City was the exception and first created direct agreements with the two earliest companies). This allowed time for cities to evaluate whether the technology was beneficial, gather data around their use, and ensure device operators remained in compliance with city law.

Cities should consider arrangement that involve the minimum number of requirements to initiate that maximize the administrative flexibility of city staff to make decisions. If a pilot takes years to translate from idea to reality, the market will have radically shifted between the program’s design and implementation. Administrative flexibility is also important, as city staff need to be able to adjust a program without going through the lengthy process of getting council’s permission for every decision. It does not make sense for a city to pilot fast-moving technology with a regulatory structure that moves too slowly. Cities should make sure to minimize liability and ensure their residents are protected, but they must also make sure any arrangement also works for company partners and does not create undue burdens for their operations. For more detailed steps designed specifically for mobility pilots, see Figure 20.

It is worth considering whether a pilot is always the appropriate arrangement for cities interested in a new technology. Pilots have the benefit of being a popular and well-understood policy mechanism for temporarily trying new ideas. While pilots may be the ideal policy tool for shared mobility devices, it does not have to be cities’ default response to every new technology. For example, Culver City began with direct agreements with e-scooter operators because they did not want to delay their first program with a lengthy process of evaluating multiple operators.
Cities may also face legal constraints on the types of agreements they strike with companies and restrictions on their procurement methods that may limit the types of pilots. It may also not make sense to include multiple providers based on the economics and business models of new technologies (e.g., docked bike share made more sense for a single provider with exclusive access to a city). Not every new technology requires a pilot. What is most important is that cities create flexible, nimble programs that allow the impact of a technology to be observed and validated. Cities should feel empowered to deploy a variety of methods so long as they are transparent and maintain clear goals for future evaluation.

**Step #6: Evaluate the Program Using Verified Data**

This final suggestion may be obvious for cities who frequently operate and evaluate programs, but whatever program is implemented needs to be evaluated and measured against whatever goals were determined at the policy’s outset. Ideally the requirement for evaluation will be part of the legal requirements in a program’s creation. For example, LADOT had to provide quarterly updates on the state of the shared mobility pilot. Every city with an e-scooter pilot program conducted some form of an evaluation, either performed by internal staff or with the help of an external agency. These evaluations were critical for allowing cities to cut through perceptions around a technology and make data-driven decisions. Similarly, cities would be wise to evaluate their decision to not embrace or operate a new technology by evaluating the technologies impact elsewhere to make sure their initial decision remains justified.

**Additional Considerations for Cities**

In addition to the key considerations above, here are several additional suggestions based on the experiences of the case study cities with e-scooters. These considerations are equally important to the previous steps, they simply did not fit within the chronological process and should be integrated throughout the entire policy response process:

- **People and roles matter.** A key theme across the various case studies was the importance of savvy individuals within city government. Many decisions in key city departments hinged on the competencies or views of single leaders, as did the decisions made by city councils. Cities that want to effectively manage new technologies must have individual staffers and leaders who can create new systems and manage the accompanying risks. Every city with a micromobility program of some form had to defer to city staff to implement a new program, and any future technology will also demand a creative staff willing to operate without clear precedent. Cities interested in being ‘innovative’ or ‘forward thinking’ should prioritize hiring and retaining staff with creative capabilities and an interest in managing novel programs. Cities must also be willing to construct new, flexible roles to ensure new technologies are overseen by staff who can prioritize addressing new technologies with the appropriate level of responsibility.

- **Consult with other cities.** Every case study city emphasized the importance of engaging with other cities to share best practice, understand the shifting legal environment, and hear how their peers were responding. The relationship between cities and well-funded,
large corporations is inherently asymmetrical. Even the largest city only represents a single market for a company. The only way for cities to understand the market dynamics and be aware of their policy options is to constantly be in conversation with their peers and share information about what each city is observing and experiencing. For example, Santa Monica hosted a shared micromobility conference with 15 other cities where they could all share best practice and potential policy options.

- **When possible, coordinate activities with other cities.** Related to communication with other cities is the importance of coordinating actions with other cities. While each city has their unique constraints when making policy, coordinating progress towards shared objectives is a powerful strategy for asserting cities goals in negotiations with private companies. For example, LADOT helped craft MDS (in part through collaboration with Santa Monica staff) and then made the final product open-sourced for other cities’ use. Every city with shared micromobility programs needed a way to manage data with providers, and MDS was able to become an industry standard only because it was adopted by many cities.

- **Critically evaluate chosen historical analogies.** Individuals at every city deployed a range of historical analogies when debating e-scooters and shared mobility, mostly using the language of other tech platforms such as Uber and Airbnb or docked bike share programs. Analogies are essential for making sense of new situations, but city leaders would be wise to carefully consider which analogy they use, and which aspects of new companies are truly comparable. Every analogy to a previous technology is loaded with policy implications of how the city should act. Rather than settle on a single analogy, leaders should work to specify which aspects of a novel technology are best understood by previous technologies or companies to provide a nuanced response. For example, simplifying e-scooters as simply ‘the next Uber’ or ‘the next docked bike share’ implies a single response, whereas the early e-scooter industry embodied aspects of both analogies.

**Lessons for Companies**

The primary audience of this research is the city leaders and staff concerned with responding to emerging technology, but the companies launching and scaling novel technological solutions are equally important. While some scholars use adversarial language pitting private interests at fundamental odds with public goods, the divide is never that simple. While individuals from every case study city voiced varying degrees of frustration at the behavior of e-scooters at some point, they also placed a similar emphasis on the power of mutually beneficial partnerships. Private companies and municipal leaders may not face the same constraints or incentives, but it is possible for profitable business activities to improve urban life. With that in mind, the following takeaways are intended for companies looking to introduce novel technologies to municipal leaders based on lessons from the launch of e-scooters.

**Prioritize a Sense of Partnership with Cities, Even Amid Disagreements**

It is difficult to specifically define what a ‘sense of partnership’ means to city leaders, but it involves some combination of trustworthiness, clear communication, and the feeling that any negotiation or disagreement occurs in good faith. Cities and private companies will always have
reasons to disagree or dispute. For example, e-scooter companies wanted the ability to deploy larger fleets with fewer restrictions than cities wanted. While partnerships are messy, it is possible to engage respectfully amid disagreement. Based on the statements of city officials, partnerships begin with ensuring the individuals who interact with cities are competent, understand cities’ needs and can communicate the companies’ positions. Ideally, those individuals do not frequently change so that cities can gain familiarity with company representatives. Many city representatives emphasized how they understood the challenges entrepreneurs faced in trying to launch their service. This sense of empathy, while it may not reduce the headaches of getting a new service approved by city governments, can serve a company’s interests when cities perceive companies as potential partners in pursuit of a city’s objectives.

Understand City Structures and the Competing Interests Within Cities

A key challenge for e-scooter companies in the early days was understanding how various cities were structured and operated. City officials reported confused interactions that reflected a misunderstanding of who had authority to make decisions within city government. The early lack of concern of local government was eventually overcome through companies’ hiring government relations staff and consultants once it was clear that e-scooters could not operate without city approval. However, companies should not wait to prioritize relationships with cities until they have no other choice. Having staff members who understand city operations can help avoid unnecessary conflicts. Companies should be aware that cities are not unitary. The goals of any single department may conflict with others and may not reflect the views of city leaders and political decisionmakers. Navigating city political actions, even at the local level, is complex and should be prioritized as early as possible.

Communicate Your Mission in Terms of a Cities’ Existing Goals

Cities are usually transparent in their goals and what they are trying to achieve through the general planning process and stated long-term objectives. City decisions hinge on whether a proposed policy meets their intended goals, and companies would be wise to present their ideas in term of a specific city’s key goals. If possible, it is beneficial to compare your services to whatever a city has already invested in or attempted. For example, part of Culver City’s enthusiasm for e-scooters was driven by previous, largely ineffective, attempts to create first-last-mile solutions. Similarly, the most enthusiastic support for e-scooters on the Santa Monica city council evaluated the devices in relation to the city’s existing mobility programs that were more expensive or less effective. This act of translating your mission into a city’s goals (and understanding a city’s concerns) will help make sure any novel technology is framed as a solution to a city’s problems instead as a potential risk to their established way of doing things. At the very least, make sure your messaging of what your company provides does not ignore or work against what a city is trying to accomplish. While being “the next Uber” may sound inspired when pitching a venture capital firm, it may horrify a city’s transportation department.
Coordinate With Existing Stakeholders

When considering how to engage with cities, it is worth examining which other stakeholders may have a shared interest in your success. For example, e-scooter companies were initially able to help fund the painting of more bike paths in Santa Monica, which is a key interest for cyclists and other transit advocates. Not all cyclists enjoyed the proliferation of shared mobility devices in Santa Monica (certainly not on the city’s beach path), but the shared interest of more funding for bike lanes was a key alignment in the interests of cycling advocates and e-scooter companies. Every city had some form of a bike or pedestrian advocacy group, and e-scooter companies benefitted from their advocacy in certain cities. There may not always be an established group of community advocates in the relevant issue area of a new technology, but it is worth examining whether any exist and exploring mutually beneficial partnerships. Winning existing advocacy groups as champions brings more legitimacy to a movement than thousands of form e-mails and temporary mobilization through an app, which many city officials said appeared inauthentic.
11. Conclusion

Considering the Legacy of the Launch of E-Scooters

The arrival of e-scooters offered an unrivaled moment of excitement, fear, and media attention among city dwellers and transportation enthusiasts. Their rapid early adoption generated enthusiastic presumptions that urban transportation would forever be changed. Meanwhile, the industry’s ongoing regulatory battles with major cities continues to be a headache for municipal leaders. Depending on one’s perspectives, the launch of e-scooters can either be construed as a cautionary tale against hard-charging entrepreneurs or triumphant innovation in the face of regulatory gridlock. Either summary would be too simple.

Overall, this research has attempted to avoid the evaluation of e-scooter policies and determining which was optimal. One reason is many e-scooter policies are still in their early phases, and the fate of the micromobility industry remains to be seen. Focusing on the arrival of e-scooters allowed this research to consider a recently completed period of history and attempt to draw lessons for future innovations. However, it is worth briefly considering the legacy and impact of these businesses’ launches.

The first unsettled question worth asking is whether the e-scooter industry’s launch was a policy failure that needs to be avoided in the future. Several individuals have responded to this research topic with the premise that the unbridled initial launch of Bird needs to be studied, “so we can make sure it never happens again,” but this assumption merits critical evaluation. Bird’s launch was certainly chaotic for any city official charged with maintaining the public right-of-way. Also, anyone who was injured by e-scooters would certainly claim they were a victim of unsafe practices. However, it is also important to clarify which injuries were uniquely caused by e-scooters, as one study found 80% of e-scooter deaths in the U.S. involved a vehicle collision. The alternatives to riding e-scooters, including walking, also carry the risk of injury or death, albeit risks that are normalized after decades of deaths due to automobiles.

Any questioning of whether e-scooter’s launch was a failure must also contend with the uncertain alternative world without Bird’s initial growth. The surprising novelty of the technology’s growth suggests there was nothing inevitable about the arrival of shared e-scooters. While the initial period of launches without permission certainly caused headaches, it also may have stimulated the industry’s development much quicker than any alternative measure. A surprising number of officials interviewed in this research sympathized with, albeit did not condone, Bird’s initial launch strategy because they felt it would have been too challenging to get the business started without demonstrating its popularity. While it is possible that an alternative world free of rogue e-scooter launches has a comparably robust micromobility market, this researcher considers it unlikely. It is likely, then, that the aggressive launch of e-scooters grew an industry that has, in turn, resulted in a partial reduction of car trips in global

cities if we are to believe each cities’ evaluations. While it is worth debating whether the launch tactics and public disruptions are worth the benefits (which are still being calculated), describing e-scooter’s launch as an inherent policy failure is too simplistic.

Consider the current state of both Santa Monica and Bird at the time of this writing (December 2021). Santa Monica is now conducting its second micromobility pilot with 3 operators selected from a pool of 8 applicants.\textsuperscript{380} Bird came in 4\textsuperscript{th} in the aggregate scoring, and while the city was allowed to select 4 operators it chose to leave Bird out. While Bird was not pleased with the decision and threatened a lawsuit, losing access to the Santa Monica market was not an existential blow to the company.\textsuperscript{381} One day after Santa Monica announced their decision, Bird announced a plan to go public, which occurred in November of 2021.\textsuperscript{382} As of this writing, the company has a $2.2 billion market cap. There is no knowing what Bird or Santa Monica will look like in the future, but it appears both are better off than before they encountered one another. Santa Monica now has an operational, compliant shared mobility program and Bird is operating around the world. However chaotic the first years of the industry appeared at the time, after 4 years it is hard to classify the industry’s launch as a failure.

A related consideration is on the e-scooter industry’s impact on other technologies hoping to launch in urban markets. Presumably future companies will be compared to Bird and Lime the way that e-scooters were constantly compared to the platform companies like Uber, Lyft, and Airbnb. As a caveat, it is impossible to assess the legacy of e-scooters while they are still in the early stage for development. However, one potential impact of Bird’s launch is that cities will be quick to assert control over the public right-of-way, particularly with sidewalks. For example, one industry that was frequently compared to e-scooters during this research was autonomous sidewalk delivery robots. The devices were initially launched in a manner like Bird (i.e., without business licenses and without prior approval) and Santa Monica city staff quickly sent the company a cease-and-desist letter and actively monitored, “the potential proliferation of devices on sidewalks deployed by multiple companies” in a report to city council.\textsuperscript{383} In other words, they worried about a repeat of e-scooters. Instead of enacting a ban, though, the city created a pilot for the devices so long as they were controlled by a human operator.\textsuperscript{384}

Is this new episode an example of cities and companies improving their ability to pilot new technology? The case of delivery robots is too new and on a much smaller scale, making it

\textsuperscript{380} Shared Mobility Selection Committee to Francie Stefan, Chief Mobility Officer, Santa Monica Department of Transportation, “Shared Mobility Pilot Program Selection Committee Recommendation,” May 4, 2021. https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Selection%20Comm%20Memo_05042021.pdf


difficult to compare and assess. However, there are reasons to believe cities may be better prepared for future innovations, at least in the realm of mobility and transportation. Cities’ use of MDS has radically improved their ability to manage novel devices and should set a precedent for data sharing between private operators and cities. Additionally, cities now have existing policy frameworks to operate novel pilots and staff who understand their dynamics. For example, Los Angeles implemented their shared mobility pilot with the goal of using that pilot structure for future transportation innovations. The city will presumably be better prepared whenever “the next e-scooter” arrives.

One final question to consider is whether there is whether city policymakers should expect to grapple with similar disruptions in the future. In other words, will there be a “next e-scooter” at all? While this researcher does not possess unique foresight, there is reason to believe future disruptions are likely because the same dynamics exist that preceded the launch of e-scooters. First, city governments largely operate in the same manner. While cities now have experience operating mobility pilots, that knowledge and practice may not disseminate throughout city governments into other domains. City governments, like all bureaucracies, will largely operate based on existing precedent and status quo. It will still be difficult to integrate new processes that break precedent, thereby incentivizing disruptive entrepreneurs to try and bypass the system when launching. Secondly, there will still be significant incentive for the private sector to introduce new urban technologies. As technology capabilities continue to evolve new profitable opportunities will present themselves. Venture capital will continue to fund these new businesses, and they will continue to seek aggressive growth. The combined features of fast-growing companies and hesitant cities promises future “e-scooter-like” conflicts.

Future urban innovations will remain a “known unknown”. We can be certain they will arrive (or already have) but cannot predict when or where. Just as in the arrival of e-scooters, municipal governments will have to find ways to adapt, to test new ideas, and the evolve in ways that allow them to continue serving their communities while mitigating public risks. Then again, as was the premise of Biber et al.’s paper, there is no reason to consider the future with ahistorical, hysterical concern. The public sector has always been evolving and adjusting its structure and function to meet the needs of the day. Concern for public benefit and status quo bias will ensure this change happens much slower than innovators and technology enthusiasts would prefer, just as it always has, but eventually disagreements will be resolved in time to begin worrying about “the next big thing”.

Future Research Questions and Lines of Inquiry

Lastly, it is worth laying out future research questions other researchers may want to pursue to build upon this work. The broadest underlying question of “how do cities respond to new things?” can be extended in countless fascinating directions and repeatedly iterated as innovations continue to appear. The simplest, or perhaps most straightforward extension of this work would be to mimic this analysis but with other technologies or in other cities. The time-consuming nature of in-depth qualitative research limited the scope of this project to a single technology in a single region. However, more ambitious versions (i.e., earlier) versions of this research aimed to compare and synthesize lessons learned from the arrival of other technologies
in other parts of the country. The question could even be extended beyond technologies in recent memory but go so far as to include technologies no longer considered novel. A comparative analysis of how cities responded to the arrival of horses, automobiles, bikes, and other major forms of urban transportation could prove fascinating.

This research avoided evaluating the impact and effectiveness of shared mobility regulations in lieu of focusing on the initial policy responses, but there remains a significant number of questions about the impact of the regulatory structures governing shared micromobility. A significant question is the impact of pricing, as the fee structures initially deployed by Santa Monica have been mimicked elsewhere. It would be worth examining the structure of those fees on city budgets, on the price for users, and the state of the market. The question of device equity is also unsettled, and cities would benefit from understanding how various equity requirements and incentives impact the market. Lastly, the biggest empirical question requiring analysis is the impact of shared mobility on a city’s broader transportation network. Many cities rely on imprecise polling data to assess the number of car trips being replaced and would benefit from more sophisticated causal analysis. Many city-specific analyses have sprung in attempts to answer this very question during the writing of this dissertation, and more will presumably arise as city leaders seek to understand what to do with shared micromobility.

Another line of inquiry could include an analysis of how municipal governments manage, analyze, and use novel forms of data. The emergence of MDS and its use in cities is a remarkable expansion of the data capabilities of city governments. Cities are not immune from the ongoing data revolution, and there is significant literature covering cities’ digital transformation and use of new data sets. However, new case studies will continue to emerge of new ways of cities organizing their operations around novel datasets. This shift may eventually pose a significant change in city government function and structure. So far, this transformation has appeared as moderate tweaks to previous structural models, perhaps just with a large IT department and a few more data scientists. However, novel uses of data may allow far more experimental models of city government to emerge which calls for exploratory research.

One final line of inquiry this researcher thought about throughout this work is a desire to understand and map how cities share information among one another. City performance is often relative, and cities compare themselves to peers when reflecting on their performance. Who are those peers, and what factors contribute to cities selecting their peer comparisons? Can city government peer comparisons be mapped through social network analysis? Relatedly, novel policy ideas disseminate from innovative cities, and there is a broader movement promoting “innovative city government”. It would be interesting to explore how policies are shared, not only by identifying the mechanisms but also proposing measurements for how ideas spread.

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13. Appendices

Appendix A – Final 18 Candidate L.A. County Cities and their Policy Responses

<table>
<thead>
<tr>
<th>Name</th>
<th>First Official Policy</th>
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<tbody>
<tr>
<td>Los Angeles</td>
<td>New Reg</td>
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<tr>
<td>Long Beach</td>
<td>New Reg</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>New Reg</td>
</tr>
<tr>
<td>Culver City</td>
<td>New Reg</td>
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<tr>
<td>West Hollywood</td>
<td>Block</td>
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<td>Glendale</td>
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<td>Pomona</td>
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<td>Torrance</td>
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<td>Pasadena</td>
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<td>Burbank</td>
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<td>Alhambra</td>
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<td>Redondo Beach</td>
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<td>Diamond Bar</td>
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<td>Monrovia</td>
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<td>Manhattan Beach</td>
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<td>Claremont</td>
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<td>Beverly Hills</td>
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<td>Lawndale</td>
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Appendix B - Interview Consent Form and Dissertation Fact Sheet

SUBJECT: Willing to be interviewed for dissertation research on e-scooters?

Dear (Participant Name)—

I'm writing to ask if you would be willing to be interviewed at your convenience for my dissertation research regarding city responses to the arrival of electric scooters in Southern California. I expect the interview would last roughly 1 hour. I would conduct the interview by Microsoft Teams and we need to complete it by (date). While you are free to decline (and no one outside the project will know this) your expertise about (choose one or more city policies, electric scooter companies) is important and will inform the findings of this study.

I've attached a short fact sheet about the project and will be calling in the next few days to follow up on this request. If you have questions, please contact me at:

Jarrett Catlin; jcatlin@prgs.edu; 909-532-1202

Jarrett Catlin
Doctoral Fellow | Pardee RAND Graduate School
Dissertation Fact Sheet

Urban Innovation: Municipal Responses to Urban Innovation
Researcher: Jarrett Catlin; [redacted contact information]

You are being invited to participate in a research study. Your participation is voluntary, and you should only participate if you fully understand what the study requires and what the risks of participation are. You should ask the study team any questions you have related to participating before agreeing to join the study.

You may refuse to answer any questions that you do not want to answer and remain in the study. You are free to confidentially decline to participate without any negative consequences.

What is the purpose of this study?

This project is my dissertation to complete my Doctorate in Public Policy Analysis at the Pardee RAND Graduate School. This dissertation aims to understand how city leaders respond to the arrival of new technologies by analyzing how certain LA County Cities responded to the arrival of electric scooters (e-scooters). These city case studies will be used to inform academic theories on the topic and provide practical insights into the interactions between tech companies and cities.

Research Procedures and Length of Participation

If you agree to join the study, I expect the interview to last roughly 1 hour.

Your participation will last for the length of the interview and may potentially involve follow-up to clarify details related to the interview topics. The overall project is anticipated to be completed by the end of January 2022.

Why are you asking me to participate?

I selected you because of your expertise in city policymaking and will be able to contribute valuable information for the study’s analysis of your city’s actions. I am only asking about 15 city managers and staff to be interviewed so your participation is important.

What will you be asking me?

The main topics I will cover are: 1) your cities’ priorities in crafting scooter policy responses; 2) motivations behind specific cities’ actions; 3) public response and input into cities’ policies; 4) companies’ priorities and objectives in rolling out e-scooters; 5) the nature of the relationship between cities and e-scooter companies; 6) how the response to e-scooters informed cities’ approach to future innovations

You may refuse to answer any questions that you do not want to answer and remain in the study. Refusal to answer any question will not have negative consequences.

How will my information be used?

I will use the information to analyze and understand cities’ priorities in crafting policies for e-scooters. I may include some direct quotes but will not be attributing them to anyone by name or position in a way that would directly identify you. However, some people who know this field may make inferences, correctly or not, about the source of the quotes.

Your involvement in the study will only include the duration of the interview, and potentially follow-up questions for clarification.

Are there any risks of participation?

As with any important topic there might be risks if your specific comments were made known outside the research team, however, I will keep the information you provide confidential and will not release it without your permission. I am following procedures to ensure that there will not be any inadvertent release of information including: No
sharing of interview notes; no identification of interviewees in discussions outside the research team or in project deliverables (briefings, reports); destruction of any notes following publication of the final deliverable.

**Are there any specific benefits to participation?**

You will be contributing to the advancing understanding of city policymaking and help inform future interactions between technology companies and cities. You will be able to request a copy of the final report from Pardee RAND Graduate School when it is completed.

Please note that there are other factors to consider before agreeing to participate such as additional procedures, use of your personal information, costs, and other possible risks not discussed here. If you are interested in participating, a member of the study team will review the full information with you. You are free to decline or stop participation at any time during or after the initial consenting process.

**Who do I contact if I have questions or need to reschedule?**

Jarrett Catlin; [redacted contact information]

If you have questions about your rights as a research participant or need to report a research-related injury or concern, you can contact RAND's Human Subjects Protection Committee toll-free at (866) 697-5620 or by emailing hspcinfo@rand.org. When you contact the Committee, please reference Study #XXXX-XXXX
Interview Confirmation Email

SUBJECT: Confirming Interview Appointment on (day/date/time)

Thanks for agreeing to be interviewed. I will be calling you at:

Number
Day/Date/Time

I am attaching the project fact sheet, in case you want to review it again.

You can contact me at:

Jarrett Catlin; [redacted contact information]
Appendix C – Discussion Guide with City Officials

Discussion Guides w/City Officials

Intro
- Revisit informed consent:
  o Answers will only be identified with cities, not individuals (i.e., ‘An official from [city name])
  o Purpose of the study, it will be published
  o No compulsion to answer any questions, can end whenever
  o Confirm whether they are willing to be recorded?
- Walk me through your role and the types of issues you oversee at [insert city]?

Background and Priorities

Confirm timeline: I lay out the course of events as I have them from CC meetings, etc…

Pre-scooters: Take me back to the period before e-scooters arrived. How did micromobility programs (like bike shares, etc…) fit into the city’s transportation vision?
  • If a program existed, how contentious were the politics/funding around it?
  • Did the city have an existing plan for expanding those services prior to scooters?

The Arrival and First Response: Ok, so now walk me through the initial arrival of scooters. I saw roughly [insert # of scooters] came to your city. What was the reaction like among city staff and leaders?
  • Which groups were most vocal in favor or against scooters?
    o What were the primary concerns? Safety, placement, the manner of arrival?
  • What communication, if any, occurred between the scooter co.’s and city staff/leadership?
    o How did different departments feel? Were any departments strongly for or against council’s initial response?
  • What were the cities’ priorities in that first period? What types of meetings and discussions were happening among [either city staff or cc members depending on the subject’s role]?
  • Did you look to the actions of any other cities in formulating your response?

The City’s Policy Response: Take me back to [whenever the first major council meeting occurred]. I want to understand what went into that meeting and the priorities of the city staff and city council.
  • [if Block] How certain was it that scooters would be banned?
    o To what extent did the company’s actions or any community groups make a difference? Or was it a foregone conclusion in the eyes of CC members?
    o What could have been done, if anything, to change the outcome? In a hypothetical world what could have led to e-scooters being allowed in [insert city]?
  • [if Block was first temporary] I saw the first ban was temporary. When it was first passed, was there any real likelihood of it not being renewed? Were the hopes of eliciting better scooter company behavior? Or was a permanent ban imminent?
• [if New Reg] How certain was it for [insert city] to eventually craft a pilot program for scooters? Was the program ever in doubt?
  o Who were the pilot program’s biggest champions within city staff and council?
  o Under what, if any, circumstances would the pilot not have happened?
• Ok, so the city agrees on a pilot, and I know the main areas of debate/enforcement were the following: geofencing, fleet size, parking compliance, speed limits, data sharing, etc…. Where did that list come from?
  o Did you follow guidance from other cities or a group like NACTO?
  o Which of those discussion areas were most contentious? Least contentious?
  o How did scooter companies react to the initial terms of the city pilot? How did the reactions differ among the companies?
    ▪ Which companies invested the most in understanding city’s needs? What did that look like?
• So were there any points during the pilot that you didn’t think it would lead to a renewal? What factors, if any, would have imperiled scooters’ future in your city?
  o How did the results from the pilot match your city’s anticipated goals? Who was pleased and who was upset by the results of the pilot?

• [If subsequent responses] So your city ultimately switched and did XXX. Walk me through that decision
  o What were the biggest factors in the policy change?
    ▪ What could have happened differently to prevent that shift in outcome?

Looking Ahead
• How did your city’s experience with scooters affect your city’s stance towards future technologies? Are there any new policies or procedures in place?
• Who else should I speak with from your city to better understand the topics we discussed?
Appendix D – Discussion Guide with E-Scooter Company Officials

Discussion Guides w/ e-Scooter Company Officials

Intro
- Walk me through your role and the types of issues you oversee at [insert company]

Background and Priorities
- Please describe the early days of your company’s rollout of electric scooters
- What were your company’s priorities at that point?
- What were the primary criteria for selecting various cities and markets? To what extent did existing policies and political climates in city government effect that decision-making process?
- To what extent did your city communicate or engage with city officials in [insert case study cities]?
- How did your company respond to [insert policy decision] in [insert case study city]?
- And other similar questions like this ….
- Knowing what you do now, would you change your company’s approach towards various cities? If so, how?

Further Discussion
- Who else should I speak with to better understand scooter company strategies and priorities?