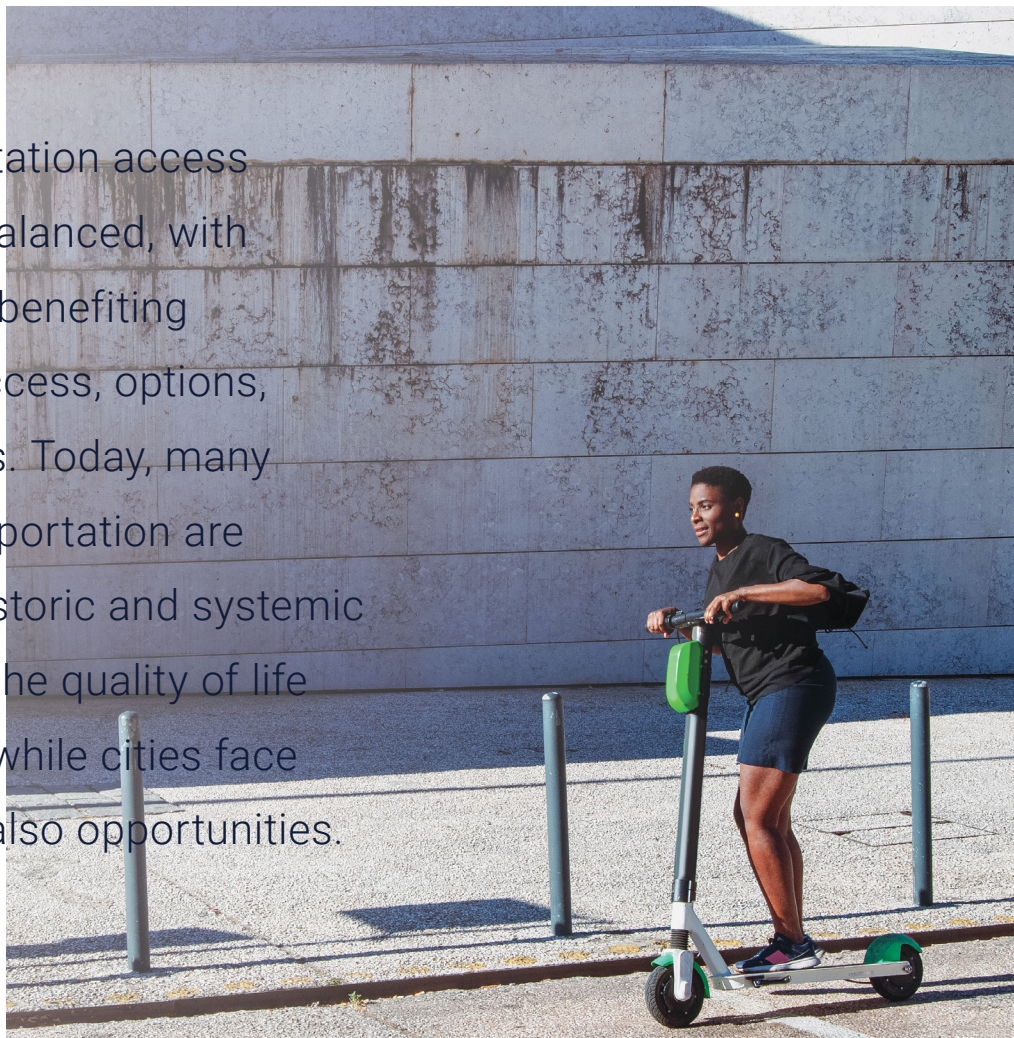


LACUNA

Harnessing Data for Equitable Mobility



Traditionally, transportation access in cities has been imbalanced, with some neighborhoods benefiting from more mobility access, options, and safety than others. Today, many Departments of Transportation are working to address historic and systemic inequities to improve the quality of life for all residents—and while cities face challenges, there are also opportunities.



Micromobility is one of those opportunities, and cities like Los Angeles have embraced its potential to bring new benefits to residents. In 2019 LA's Department of Transportation launched a powerful new tool: a digital policy management platform. The platform empowered the City with full visibility to where, when, and what commercial micromobility activity was happening in the public right-of-way, and to harness data-driven insights to make strategic policy decisions.

One such learning revealed ridership patterns largely mirrored vehicle deployment patterns. Higher numbers of vehicles meant higher ridership—and those vehicles tended to stay in or near neighborhoods in which they were deployed¹. Another learning was that private operators were gravitating toward old patterns—overwhelmingly deploying fleets in neighborhoods with plentiful transportation options.



INITIAL EQUITY POLICIES

LADOT developed an initial set of equity policies aimed to incentivize higher fleet deployments in underserved communities. Operators that deployed vehicles in Disadvantaged Communities (DACs)²—designated using the platform’s geofencing capabilities—would be permitted to increase their overall fleets by 2,500-5,000 vehicles, all of which would receive a discount from the

standard annual rate of \$130 per vehicle per year.

Using their digital policy management platform to measure the outcomes of these equity policies, LADOT staff found the incentives did result in greater vehicle deployment to DACs at first, but the data indicated non-DAC areas had between 42-95% greater deployment volumes than DACs, even at peak deployment in

July 2019. After the peak, month-over-month data also indicated operators’ DAC deployments waned dramatically.

The platform enabled LADOT to quickly and easily understand they would need to evolve the initial equity policies to result in more meaningful, sustainable equitable access to micromobility.



OPTIMIZING POLICIES: VERSION 2.0

In April 2021, LADOT rolled out several enhancements to their equity policies via the digital policy management platform:



Redefining populations in need

With the goal of a more evenly distributed micromobility fleet throughout the city, LADOT began redefining the populations who were being underserved by existing transportation. It replaced DACs, which focused heavily on socioeconomic disadvantages, with two new types of zones more strongly focused on transportation deficiencies, such as lack of access or lack of safety: Mobility Development Districts (MDDs) and Equity-Focus Mobility Development Districts (EFMDDs)³. LADOT staff redrew the geofences and used the platform to communicate the new policy directly to operators' systems. Conveniently, these geofences can be regularly updated within the digital policy management platform as policies and resident populations evolve over time.



Stronger deployment requirements

LADOT also used the platform to geofence areas with particularly high demand—and high value to operators—as “Special Operations Zones” (SOZs). The City then required operators to deploy at least 10% of their fleets in EFMDDs and MDDs in order to be permitted to operate in the SOZs.



Variable per-trip pricing

To ensure serving EFMDDs and MDDs was financially viable for operators, LADOT complimented the deployment requirements with a new pricing structure. Using the platform's ability to count every trip by every vehicle, the City pivoted from annual per-vehicle flat fees to a tiered set of per-trip fees.

Trips beginning and ending in high-demand SOZs commanded the highest fees, followed by standard permitted districts (areas neither designed as SOZs nor as MDDs/EFMDDs). LADOT applied dramatically reduced fees to MDDs, and eliminated fees altogether for trips beginning or ending in EFMDDs. For trips that began in one type of district but ended in another, LADOT charged the lower of the two.⁴ The platform automatically records the fee for each trip taken, and LADOT receives a total tally of fees for its monthly invoice for each provider (see chart below).

LADOT PRICING

		FROM			
		SPECIAL OPERATIONS ZONES	STANDARD PERMITTED DISTRICTS	MOBILITY DEVELOPMENT DISTRICT	EQUITY-FOCUS MOBILITY DEVELOPMENT DISTRICT
TO	SPECIAL OPERATIONS ZONES	\$0.40	\$0.20	\$0.06	\$0.00
	STANDARD PERMITTED DISTRICTS	\$0.20	\$0.20	\$0.06	\$0.00
	MOBILITY DEVELOPMENT DISTRICT	\$0.06	\$0.06	\$0.06	\$0.00
	EQUITY-FOCUS MOBILITY DEVELOPMENT DISTRICT	\$0.00	\$0.00	\$0.00	\$0.00

THE RESULT: TREND REVERSAL

Facing declining trips in the first half of 2021, LADOT was able to reverse the trend and increase trips by 3% in the following 3 months following policy changes.

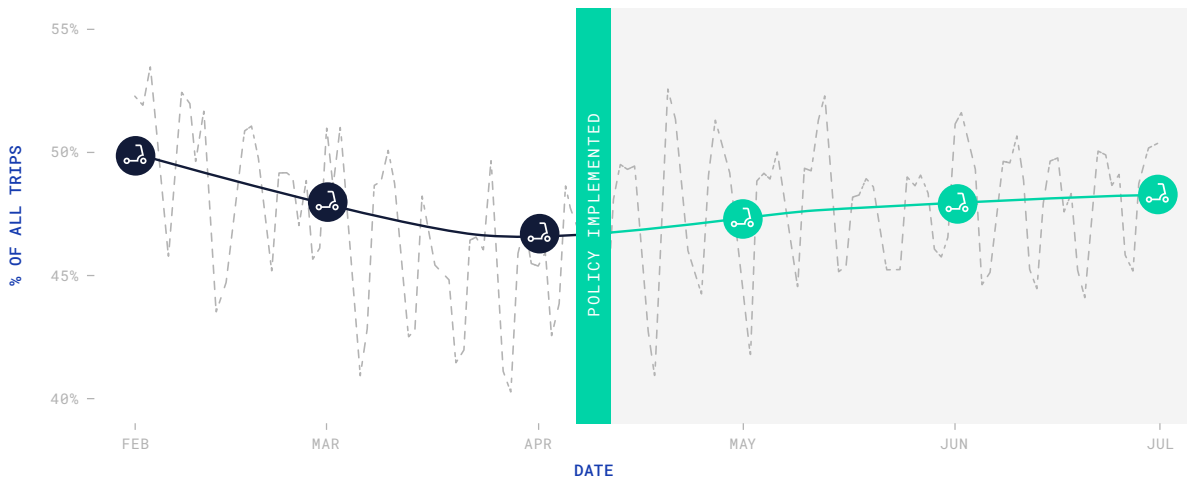
In partnership with LADOT, Lacuna analyzed the ridership data from February to July 2021, using trips that started or ended in an MDD or an EFMD, expressed as a percentage of total trips, as the metric for success. If the policies resulted in more trips beginning or ending in the MDD or EFMD zones, that percentage would increase—which was crucial given trips had been trending downward for the first half of the year.

When LADOT implemented the policy changes, the **trend reversed, and rose by as much as 3%** in the three months that followed. In other words, setting specific incentives and policies, and communicating them to operators in a verifiable and universal (i.e. digital) way, had a positive impact on trips to and from areas with transportation deficiencies, helping the city to reach its goal of more evenly-distributed options and access.

In pursuit of a micromobility program that works for all residents, LADOT's digital policy management platform was, and continues to be, an indispensable tool. Cities around the world have the opportunity to harness these platforms, like Lacuna's **City Conductor**, to make strategic decisions that connect private-sector innovation to the greater good—not just for micromobility, but for all commercial modes today and tomorrow.

REVERSING THE TREND

% of trips in Equity-Focus Mobility Development Districts and Mobility Development Districts Over Time



ADDITIONAL EQUITY INCENTIVES & REQUIREMENTS

To help remove the financial barriers to access, increase enrollment, and garner community support for the micromobility program, LADOT implemented additional permit requirements for operators, including:



A cash payment option for unbanked customers



An SMS or call-in option for those without smartphones



Discounted subscription plans for verified low-income customers



Strategies for increasing awareness of these equity options, as well as for engagement with older residents and those with disabilities

The city is also planning to bolster its fleet-based incentives to:

- Encourage operators to create quality full-time job opportunities and site operations in equity zones
- Use revenue from permit fees to subsidize operations and maintenance support
- Dedicate funding and resources to community engagement for residents with the fewest mobility choices

REFERENCES

¹ Los Angeles Department of Transportation. (July 2020). Year One Snapshot: A Review of the 2019-2020 Dockless Vehicle Pilot Program. <https://ladot.lacity.org/sites/default/files/documents/ladot-dockless-year-one-report.pdf>.

² In 2019 LADOT defined DACs using the California Office of Environmental Health Hazard Assessment's CalEnviroScreen Version 3.0, a screening tool based on a climate index that incorporates factors such as potential exposure to pollutants, socioeconomic factors, and prevalence of certain health conditions (<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>).

³ Equity-Focus Mobility Development Districts are defined as areas that meet the Nelson A. Rockefeller Institute of Government's Hardship Index (<http://www.phasocal.org/wp-content/uploads/2014/03/EH-urban-hardship-Rockefeller-Institute-2004.pdf>) and have transportation deficiencies in access, safety, etc. Mobility Development Districts have similar deficiencies but do not meet the Hardship Index.

⁴ Los Angeles Department of Transportation. (2021). Dockless Mobility Annual Permit Application. <https://ladot.lacity.org/sites/default/files/documents/ladot-dockless-mobility-annual-permit.pdf>

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