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Curbtopia! – The Ideal Curb of the Future...

Picture this: bustling city streets, not choked with parked cars, but teeming with life. People zip by on bikes, scooters, and electric vehicles. Public transportation seamlessly connects with car-sharing options. This isn't a utopian fantasy; it's the future of our streets, unlocked by rethinking a precious resource – curb space.

Curb space has traditionally been dominated by parked cars, hindering alternative uses. But what if we transformed this limited real estate into a dynamic platform for a more sustainable and livable urban environment? Join us as we explore the exciting possibilities of “Curbtopia” – a vision where curbs work for everyone, not just parked vehicles.

Sir Thomas More's book, "Utopia," imagined a blueprint for a perfect society. “Utopia” depicted a land free from war, with equal rights and shared resources. People lived in harmony with nature, and their days were filled with meaningful work and leisure. While achieving such a utopia might seem far-fetched, the concept inspires us to strive for a better world.

In this column, we'll explore a similar idea – "Curbtopia." It is not a perfect world, but it is a vision for our city streets, where prioritizing people over parked cars creates a more vibrant and sustainable urban environment. Just like More challenged the status quo, Curbtopia proposes a radical rethink of how we utilize a vital, yet underused, resource: curb space. This column dives into strategies for transforming curb space into a dynamic platform for a multitude of uses, fostering everything from bike lanes and electric vehicle charging to efficient public transportation hubs and thriving community spaces.

The Potential for the Curb Is What Is NOT (now) on the Curb

Curb space in cities is a precious commodity. Traditionally viewed as a place to park cars, a growing number of urban planners, advocates, policymakers, and decision-makers are rethinking this limited resource. Historically, curbs have been dominated by parked cars, hindering alternative uses. However, with the rise of ride-sharing, delivery services, and a focus on pedestrian-friendly spaces, the curb needs to evolve. By moving vehicle storage off-street, we unlock a multitude of possibilities for the curb. This could include creating dedicated lanes for buses, bikes, or even delivery service vehicles. Public parking garages, multi-story car parks on underutilized land, and carpooling initiatives can all contribute to reducing on-street parking demand.

Reclaiming curb space goes beyond just freeing up room for vehicles. It can create space for wider sidewalks, outdoor dining areas, charging stations for electric vehicles, or even small parks and green spaces. The current focus on on-street parking as the primary use for curb space significantly hinders its potential. A multi-faceted approach that prioritizes off-street parking solutions can open up a whole new world of benefits for our cities.

Transforming traditional parking garages into mobility hubs creates a more dynamic and user-friendly transportation experience. Designated spaces for car-sharing programs offer convenient access to shared vehicles, reducing the need for individual car ownership. Zipcar and Truqit, for example, store shared vehicles in garages, making the vehicles easily accessible, and keeping them off the street.¹ Additionally, integrating electric vehicle (EV) charging stations incentivizes the transition to cleaner transportation while simultaneously addressing the critical need for charging infrastructure.² Furthermore, secure bike and scooter parking within these hubs encourages alternative modes of transport, freeing up even more valuable curb space for other uses. For example, New York City-based bike-share company JOCO rents to delivery riders who can access bikes inside parking garages across the city.³



JOCO e-bike station

Repurposing municipal and private parking lots into contained mobility hubs fosters a more efficient transportation network. Intercity bus companies, ride-hailing services, and other transportation providers can use these designated areas for staging and passenger pick-up/drop-off. This centralized approach reduces traffic congestion caused by double-parked vehicles or circling vehicles searching for passengers or for free curb space to park. Additionally, implementing designated loading and unloading zones within these hubs streamlines commercial deliveries, further minimizing the impacts of on-street parking availability.⁴

¹ <https://www.nyc.gov/html/dot/html/motorist/carshare.shtml#howitworks>

² <https://iconparkingsystems.com/evcharging>

³ <https://ridejoco.com/locations>

⁴ <https://www.stantec.com/en/ideas/topic/mobility/todays-parkin-lots-are-tomorrows-mobility-hubs-why-is-it-a-better-use-of-space>

Existing bus terminals serve as a model for efficient off-street solutions. These facilities can house not just buses, but also integrate other transportation modes, creating a more cohesive network. Dedicated areas for carpooling drop-off points or bike storage can encourage multi-modal commuting, reducing reliance on single-occupancy vehicles. The Port Authority of New York and New Jersey is planning to build its new Midtown Manhattan bus terminal to replace the existing 73-year-old structure. It will include a separate bus storage and staging building, with new ramps leading directly into and out of the Lincoln Tunnel. Now, many bus operators pick-up and drop-off at the curb around the bus terminal.⁵

Curb Potential: Location, Location, Location!

Not all curbs are created equal. Their potential depends largely on their location within the city. Here is how curb usage can be optimized based on three distinct urban zones:

- ***High Volume (CBD) Curbs:*** In bustling Central Business Districts (CBDs), curb space is a lifeline for the efficient movement of people and goods. Here, prioritizing high-occupancy vehicle (HOV) lanes for buses, taxis, and carpools reduces traffic volume. Designated zones for short-term parking by car-sharing and ride-hailing services cater to shared mobility needs without obstructing traffic flow. Curbside charging infrastructure can support electric vehicles while they park. Docking stations for bike-share and scooter-share programs offer environmentally friendly options, while designated loading zones with time limits streamline deliveries. Additionally, exploring micro-hubs for consolidating deliveries and creating protected bike lanes can further optimize curb space in dense urban cores, fostering a more vibrant and livable CBD.
- ***Multi-Modal Curb Hubs:*** Curbs surrounding transportation hubs like train stations are prime territory for creating seamless connections within a Mobility as a service (MaaS) network. MaaS integrates various transportation options – public transit, bike-share, car-share, ride hailing – into a single platform for users. By designating areas for bike and scooter rentals directly at these hubs, commuters can easily transition between long-distance travel and the "first and last mile" to their final destination. Secure bike parking further incentivizes multi-modal commuting, reducing reliance on single-occupancy vehicles.

Imagine a scenario where a commuter arriving by intercity bus (like Flixbus) at a station can seamlessly rent a bike or e-scooter from a designated area at the curb, thanks to government subsidies that make these rentals affordable. This eliminates the need to hail a taxi or wait for a ride-hailing service, reducing congestion caused by circling vehicles. Dedicated pick-up/drop-off zones for these services can coexist with the rentals, ensuring smooth passenger flow for those who prefer them. Moynihan Train Hall in New York City, with its designated taxi, FHV pick-up/drop-off points and curbside intercity bus stops,

⁵ <https://www.panynj.gov/bus-terminals/en/port-authority/planning-level-scoping-process-pabt.html>

already demonstrates the effectiveness of this approach.⁶ By transforming curb space into these multi-modal hubs and potentially offering subsidies for alternative modes of transport, cities can create a more efficient and user-friendly MaaS network. Federal funding is available for creating these types of projects, particularly for promoting equity in communities with less access to transportation. Promoting equity means connecting communities to transportation hubs, often with better access to fixed, or on-demand transit, shared mobility, and shared micromobility.⁷



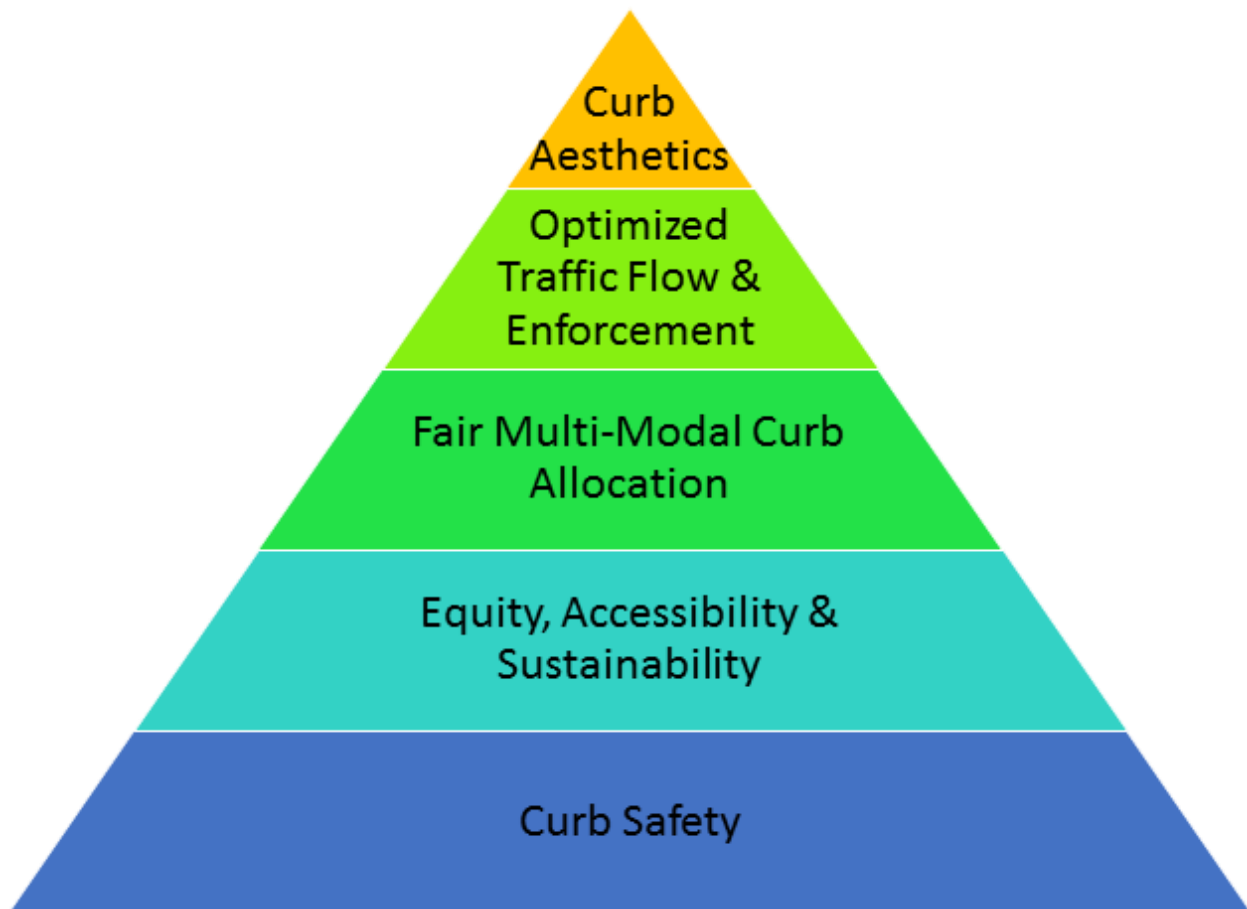
Moynihan Train Hall curb

- **Residential Curbs:** Curb space in residential areas serves a different purpose. The focus here often shifts towards balancing resident parking needs with fostering a community atmosphere. Permit-based parking systems may ensure resident access while deterring all-day parking by commuters. Additionally, designated zones for car-sharing services can offer residents convenient access to vehicles without the burden of individual car ownership. Residential areas may also lend themselves to long-term, or overnight parking at the curb. Curbside EV charging stations can be strategically placed in residential areas to support the growing adoption of electric vehicles. This not only encourages sustainable transportation choices but also caters to residents who may not have access to private charging at home. Particularly beneficial to residential neighborhoods might be charging infrastructure like that from *itselectric*, a start-up company which allows land owners to connect curbside chargers to their own electrical supply, earning property owners passive income.⁸

⁶ <https://moynihantrainhall.nyc/transportation/>

⁷ <https://t4america.org/2022/03/28/infrastructure-law-and-equity/>

⁸ <https://www.itselectric.us/how-it-works>



Imagine curb space as a resource that fulfills a hierarchy of needs, similar to Abraham Maslow's famous pyramid. Maslow's theory proposes that human needs progress from basic survival needs at the bottom to more complex social and self-actualization needs at the top.

In the context of curb space, policymakers prioritizing a "Curbtopia" would design with a similar hierarchy in mind. Here's how Maslow's framework can be applied:

- **Curb Safety:** Just like needing food and shelter, safety is paramount. Clear pedestrian walkways, designated crosswalks, and safe drop-off/pick-up zones for children are essential. This aligns with the first policy consideration: curb safety.
- **Equity, Accessibility, Sustainability:** Once safety is ensured, the focus shifts to creating a space that caters to a diverse range of users. This aligns with the second policy tier, prioritizing equity, accessibility, and sustainability. This might involve dedicated areas for bike lanes, ensuring access for people with disabilities, and incorporating electric vehicle charging stations to promote environmentally friendly transportation.
- **Fair Multimodal Curb Allocation:** As the curb space becomes more versatile, policymakers must fairly allocate space for different modes of transportation. This aligns with the third consideration: fair multimodal curb allocation. This could involve designated

car-sharing zones, ride-hailing pick-up/drop-off areas, and public bike-sharing stations, ensuring everyone has access to the most efficient option for their journey.

- **Optimized Traffic Flow & Enforcement + Aesthetic Streetscapes:** At the top of Maslow's pyramid lies the desire for personal fulfillment and a flourishing environment. In our curbtopian vision, this translates to optimized traffic flow and enforcement (consideration four) to minimize congestion and frustration, alongside aesthetically pleasing streetscapes (consideration five). This could involve synchronized traffic lights, improved signage, and even incorporating greenery or public art to create a more vibrant and enjoyable urban environment.

Reimagining Our Streets: Rules for Curbtopia Equity

Rule #1: Dense CBDs require a radical shift to achieve Curbtopia. Parking for private motor vehicles (PMVs) must be significantly reduced, with exceptions for designated parking for persons with disabilities. This reclaimed space can be transformed into multi-functional zones, with space on curbs and roadways allocated to storage for bikes, scooters, and micro-mobility devices, outdoor dining, pedestrian plazas, and other uses. Off-curb parking can be designated for car share fleets or for commercial vehicles during loading/unloading times, while strategically placed charging stations will power the transition to electric vehicles. Unnecessary parked vehicles and bulky storage racks will be removed from streets altogether. Outdoor dining will be minimized and strictly regulated to prevent excessive sidewalk encroachment, and more importantly, to ensure the safety of outdoor dining patrons.



Matt Daus charging up at Revel

Rule #2: Efficiency goes beyond space allocation. In Curbtopia, delivery services will be incentivized to embrace sustainability by switching to electric cargo bikes, e-bikes, and e-scooters. Congestion pricing exemptions for any e-delivery vehicles or trucks, with dedicated loading zones for sustainable alternatives, would create a clear economic advantage. Fernhay, for example, produces zero emission e-cargo equipment that enables companies to be more efficient across cities, including parcel delivery and city center operations.⁹ Furthermore, in Curbtopia, private entities will be encouraged to install public electric vehicle chargers, which will expand charging options for residents who may not have access to private charging at home. The ride-share company Revel, for example, has built three large public charging stations in New York City and is still expanding.¹⁰



Matt Daus at Revel's NYC Headquarters

Rule # 3: Ensuring the rules are followed is crucial. In Curbtopia, automated enforcement cameras will deter illegal parking and ensure micro-mobility users like cyclists stay within designated lanes. The automated curb management solutions company Automotus, for example, develops curb management solutions for cities, like cameras that measure curb traffic for

⁹ <https://fernhay.com/>

¹⁰ <https://gorevel.com/charge>

different modes to identify violations.¹¹ Citizen complaints alone should not dictate enforcement actions, nor should there be any citizen complaint process like NYC has for its anti-idling laws, where anyone can receive a commission or bounty on a government fine (as this could lead to abuse).¹² Focus on data-driven enforcement using automated systems ensures fair and consistent implementation of the rules, and can help achieve more equitable outcomes.

Rule #4: Curb space surrounding train stations and bus terminals should prioritize links between public transportation and shared modes to facilitate car-free “first and last mile” connections for commuters. Increasing access to shared mobility options like car share, bike-share, and microtransit (shuttles) is crucial for improving overall transportation networks.¹³ Public transit and shared modes are natural complements, catering to different trip types and making car-free or car-light lifestyles more feasible. A MaaS platform integrating various options into a single user experience can help create multi-modal hubs around transportation hubs, transforming curb space into a dynamic MaaS platform. Bike-sharing stations, car-sharing pick-up/drop-off zones, and dedicated areas for microtransit and ride-hailing services can all coexist, conveniently located for easy access. This fosters seamless user journeys within the MaaS network. Further encouraging this shift towards multi-modal commuting could involve solutions like housing projects with integrated public transit access or two-fare zones offering reduced fares for shorter trips near hubs.

Rule #5: Residential areas have unique needs to attain Curbtopia. Level 2 electric vehicle chargers installed directly on residential streets will provide convenient charging options for residents who may not have access to private charging at home. Again, itselectric allows land owners to connect curbside chargers to their own electrical supply, earning property owners passive income.¹⁴ Furthermore, curb space needs to cater to the growing popularity of sustainable micro-mobility options. Designated spaces for EVs can coexist with secure parking for e-bikes and e-scooter racks, fostering a diverse and environmentally friendly transportation landscape.

¹¹ <https://www.automotus.co/curb-management>

¹² <https://portal.311.nyc.gov/article/?kanumber=KA-02222>

¹³ <https://www.trb.org/Main/Blurbs/174653.aspx>

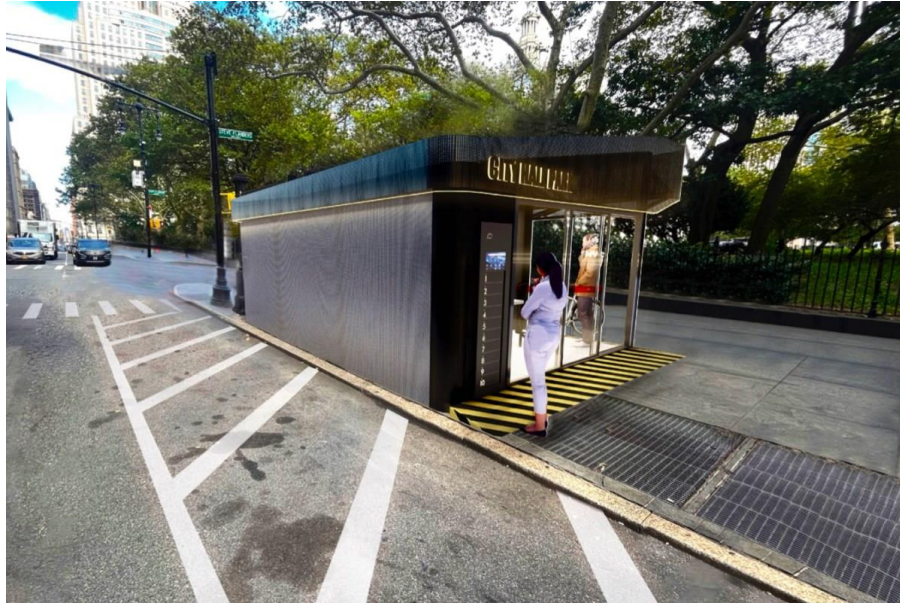
¹⁴ <https://www.itselectric.us/how-it-works>



itselectric charger

Rule #6: While community input is valuable, absolute veto power from neighborhood boards should not hinder progress. NIMBY is an acronym for “Not in My Backyard,” which describes a movement where residents oppose new developments or changes in their communities. NIMBYism is often driven by concerns about potential negative impacts like increased traffic, noise, reduced property values, affordable housing, and high and medium-density developments. For example, New York City’s community boards have advisory roles in many land use and transportation decisions. While they have no decision-making power, community boards can have strong voices in creating political pressure around issues of concern. Manhattan’s Community Board 1 (CB1) recently voted to reject an e-bike charging hub meant to replace a defunct newsstand outside City Hall. The hub is part of a pilot that will allow e-bike users to safely drop off and charge batteries and will include a rest stop for delivery workers for bike tune-ups, and an information booth. CB1 opposed the kiosk as too modern for the landmarked City Hall area, as well as potentially complicating crowd control in that area.¹⁵ While the city may build the hub, CB1’s vote is a strong indicator of local sentiment.

¹⁵ <https://www.thecity.nyc/2024/03/26/manhattan-community-board-schumer-city-hall-ebike-charging-hub/>



Lower Manhattan charging hub

Conversely, Manhattan’s Community Board 4 (CB4) has spent years advocating for the new Port Authority bus terminal replacement, as the terminal is within CB4’s bounds. CB4 is a good example of an active community board that has a thoughtful and pro-active transportation committee chaired by knowledgeable and experienced Co-Chairs Christine Berthet and Jesse Greenwald.¹⁶ Creating community involvement and input through community boards can help support large and important projects like the new bus terminal.¹⁷ Open discussions and data-driven decision making are crucial for optimizing curb space allocation for the greater good of the city. In a nutshell, community input, but not total control, makes for better policy outcomes.

¹⁶ <https://cbmanhattan.cityofnewyork.us/cb4/committees/transportation/>

¹⁷ <https://cbmanhattan.cityofnewyork.us/cb4/wp-content/uploads/sites/10/2024/03/18-EXEC-CHKLU-Letter-to-PANYNJ-re-Draft-Environmental-Scope-of-Work-for-the-Midtown-Bus-Terminal-Replacement-Project.pdf>

A Hungry Curbivore



From Left: Maylin Tu, Matthew Potter, Tiya Gordon, Matt Daus, Rep. Laura Friedman, and Sam Baker

In March 2024, I spoke on a panel at Curbivore 2024 in Los Angeles. Curbivore is an annual conference and industry meetup that focuses on the curb and the community, and how commerce is moving to the curb at an increasing rate. Curbivore is the only place where over 1,000 decision-makers gather to create the future of curbside commerce. The conference was very future forward, and many of the topics in this article were discussed, including the use of technology to make curb policy. Kudos go to Harry Campbell (<https://therideshareguy.com/>) and Jonah Bliss (<https://www.thecurbivore.com/>), who organized this meaningful and productive event, which had helped to fuel a movement.



Matt Daus at Curbivore inside a Fernhay delivery vehicle

The panel—*“Building a Better Tomorrow: Creating Cities That Work for All”*—focused on how new public and private sector funding streams are dramatically reshaping our cities and transport systems. Journalist **Maylin Tu** moderated the panel, which also included **Rep. Laura Friedman, California State Assembly**; **Tiya Gordon, Co-Founder at itselectric**; **Sam Baker, Managing Partner at MobilityFund**; and **Matthew Potter, Director of Interaction Design at BMW Designworks**.



Matt Daus and California State Assemblymember Laura Friedman (44th District)

Maylin Tu is a freelance writer and reporter covering transportation and infrastructure in Los Angeles with bylines in the Guardian, KCET, Next City, LAist, LA Public Press and JoySauce.¹⁸ First elected to the California State Assembly in November 2016, **Laura Friedman** represents the cities of Burbank, Glendale, and Los Angeles, as well as the communities of La Crescenta, Lake View Terrace, Montrose, North Hollywood, Shadow Hills, Sherman Oaks, Sunland-Tujunga, Studio City, Toluca Lake, and Valley Village. Friedman’s legislative work is focused on addressing housing affordability and homelessness, climate change, and protecting vulnerable communities.¹⁹ **Tiya Gordon** holds 20 years of experience in leadership and design operations across a range of disciplines for some of the country’s top firms and institutions. Her founding of itselectric is the first step in her refocusing the next 20 years of her career on projects waging war against the Climate Crisis.²⁰ **Sam Baker** serves as the Managing Partner of MobilityFund, a venture capital firm focusing on early-stage investments in disruptive technologies in the transportation sector, including connectivity, autonomy, sharing, and electrification. He also co-founded and scaled Wunder Mobility, a top-tier European mobility start-up.²¹ **Matthew Potter** is the Director of Interaction Design in the LA studio. Together with his team, Matthew works on interdisciplinary projects in the area of user experience as well as tangible and graphical user interaction.²²

¹⁸ <https://nextcity.org/urbanist-news/author/maylin-tu>

¹⁹ <https://a44.asmdc.org/>

²⁰ <https://www.itselectric.us/about>

²¹ <https://www.mobility.fund/>

²² <https://www.bmwgroupdesignworks.com/people/matthew-potter/>



Matt Daus and Dezso Molnar, Co-Founder of MCMC and the Molnar-Calfee Surfecycle



Matt Daus and Marcel Porras, Deputy Chief Innovation Officer of Los Angeles Metro

Our discussion answered the question, as we rebuild America, how do we do so in an equitable, sustainable manner? The panelists' answers spanned from future business models for multi-modal delivery to the push to increase TNC and delivery worker pay. I spoke about the

potential for coordination across competing curb users, new programs being tested across the country, and the need for centralization of this type of coordination. We also examined how governments and agencies are looking for new funding streams for transit, like sales tax measures, congestion pricing, and new federal dollars, and at the regulatory opportunities and challenges for mass electrification of vehicles, including turning federal investment in transit and EVs into green jobs.



Delivery Bots at the Curbivore lot

DeliveryCon

On October 18, 2023, I spoke on the *“Who Will Win the Battle for the Curb?”* panel at the inaugural DeliveryCon conference in Las Vegas. DeliveryCon is a new fleet-focused conference and exposition designed to help delivery fleets of all types discover strategies to keep wheels on the road and drivers safe. The conference featured discussions around solutions for truck and van procurement, maintenance, parts sourcing, designing, upfitting, routing, safety, technology integration, and more. Congratulations go out to Chris Brown and Bobit Media for hosting and organizing this seminal and productive conference. DeliveryCon 2024 dates and location are coming soon!²³

²³ <https://www.deliverycon.com/>



From Left: Kathryn Schifferle, Bill Klehm, and Matt Daus

DeliveryCon covered optimizing fleet efficiency and operations, adapting to industry changes, reducing operational costs, strategic fleet management and planning, and legal and safety considerations. The discussions provided a platform for knowledge exchange and collaboration, addressing key challenges and innovations in the dynamic landscape of freight solutions and operations.

The panel I participate in was moderated by **Kathryn Schifferle, *Founder and CVO of Work Truck Solutions***. I was joined by **Bill Klehm, *CEO of eBliss Global***. The panel discussed issues around last-mile delivery, ride-hailing, curbside pickup, parking, and automated enforcement. We explored how fleets can decrease this cost center while increasing efficiency and safety, as well as regulatory and policy initiatives, off-street alternatives, enforcement technologies, smart loading zones, e-bike use, and more.



From Left: Chris Brown, Associate Publisher at Bobbit Media; Matt Daus; Percussionist Cindy Blackman; and Guitarist Carlos Santana at Nobu in Las Vegas for DeliveryCon

I spoke about the need for curb regulations for taxis and for-hire vehicles, as they are essential pieces of public transit systems. Central to this issue is New York City's congestion pricing program, which could price out taxis and for-hire vehicles from Manhattan's CBD. It becomes an equity issue when the livelihood of a mostly minority workforce is threatened by a tolling structure that is designed to reduce the number of vehicles in the CBD. Riders who require taxis and for-hire vehicles to gain access to Manhattan are also put at risk, paying more for essential rides. The University Transportation Research Center's report, *Equity Impacts of NYC Congestion Pricing on Taxi and For-Hire Vehicle Drivers and Passengers*, published in 2022, highlights issues concerning existing congestion charges, industry recovery from COVID, and impacts on low-income residents who rely on taxi and FHV services. Thanks to the MTA for heeding our call, and reducing charges for taxis and FHVs.



**EQUITY IMPACTS OF NYC CONGESTION
PRICING ON TAXI & FOR HIRE VEHICLE
DRIVERS & PASSENGERS**

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Read the UTRC report at <https://tinyurl.com/bdfap72k>

Rethinking Our Streets: A Battleground Redefined

Our city streets are locked in a battle over curb space. Traditionally for parked cars, this limited resource can be transformed. By moving car storage off-street and embracing a multi-faceted approach, we can create a future focused on sustainable transportation, and a more livable city.

The key is to use parking garages and lots differently. Imagine them as mobility hubs with car-sharing programs, electric vehicle charging stations, and secure bike and scooter parking. Repurposing these lots into designated areas for pick-up/drop-off and deliveries can further reduce congestion. Existing bus terminals serve as a model for this efficient off-street approach, integrating other transportation modes and encouraging multi-modal commuting.

Making the most of every curb requires a location-based strategy. Busy CBDs benefit from prioritizing high-occupancy vehicles, car-sharing, and ride-hailing services alongside EV charging and bike-share stations. Transportation hubs should focus on seamless connections with designated areas for rentals, secure bike parking, and pick-up/drop-off zones. Residential areas can balance resident parking with community needs through permit systems and car-sharing zones, while also offering curbside EV charging.

There is a movement underway, as seen by the growing number of conferences involving curb allocation and goods delivery, including DeliveryCon and Curbtopia.

By working together and prioritizing data-driven decision-making, we can move beyond the curb space battleground and embrace Curbtopia. This vision features vibrant, people-centric spaces that promote sustainable transportation options and foster a more livable and equitable urban environment.