

Reports from the Battle for the Curb

Using Social Media to Understand Challenges
Faced by Urban Delivery Drivers

Evan Iacobucci

Department of City and Regional Planning
University of North Carolina

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A Little Background

Explosion in Urban Freight

Volume and Velocity



Explosion in Urban Freight

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- 2019: 14.7 billion parcels delivered in United States



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- 2019: 14.7 billion parcels delivered in United States
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Explosion in Urban Freight

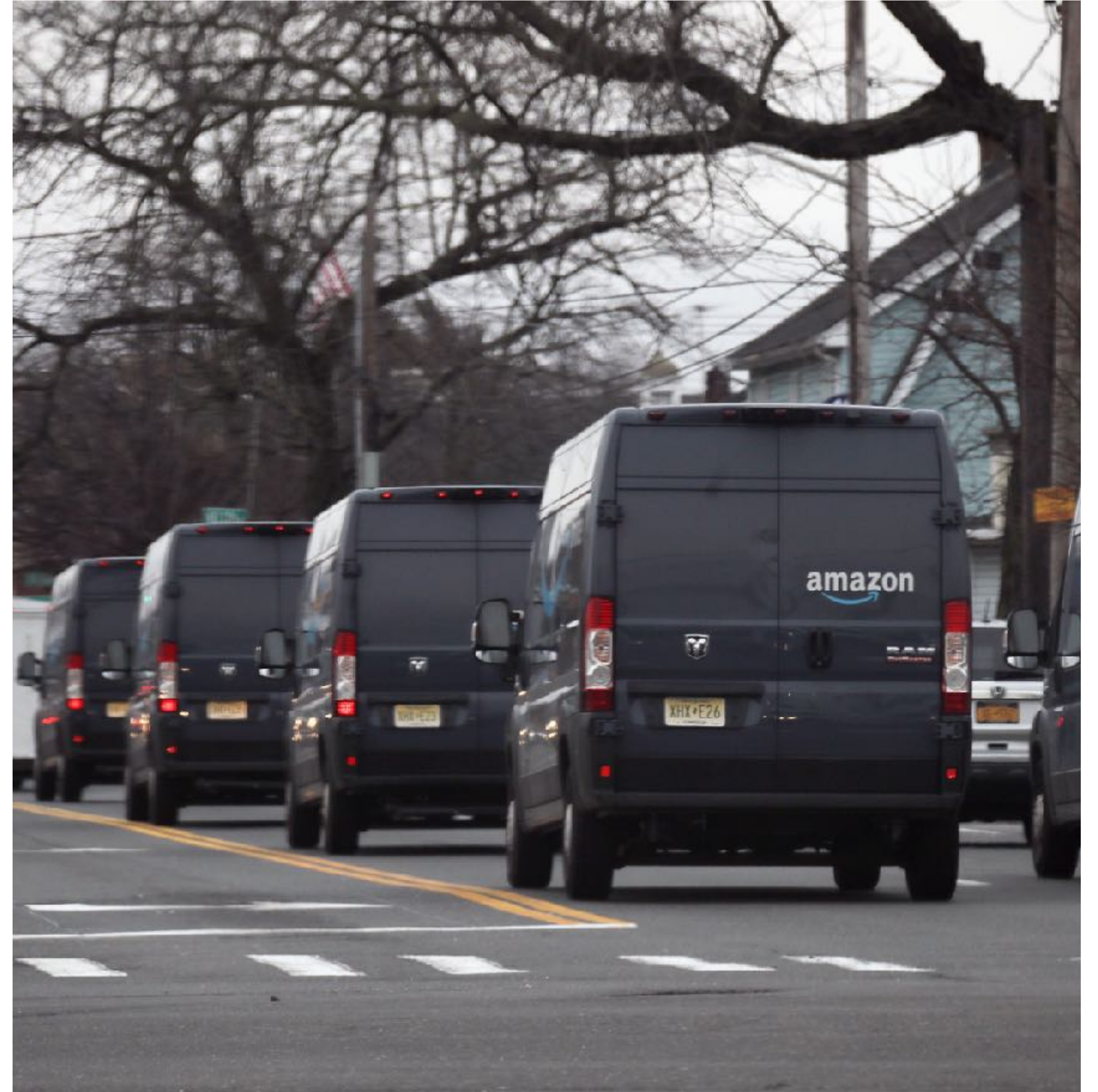
Volume and Velocity

- 2019: 14.7 billion parcels delivered in United States
- 2020: 20.2 billion parcels delivered in United States
- Rapid shipping is “table stakes”



Curb and Traffic Impacts

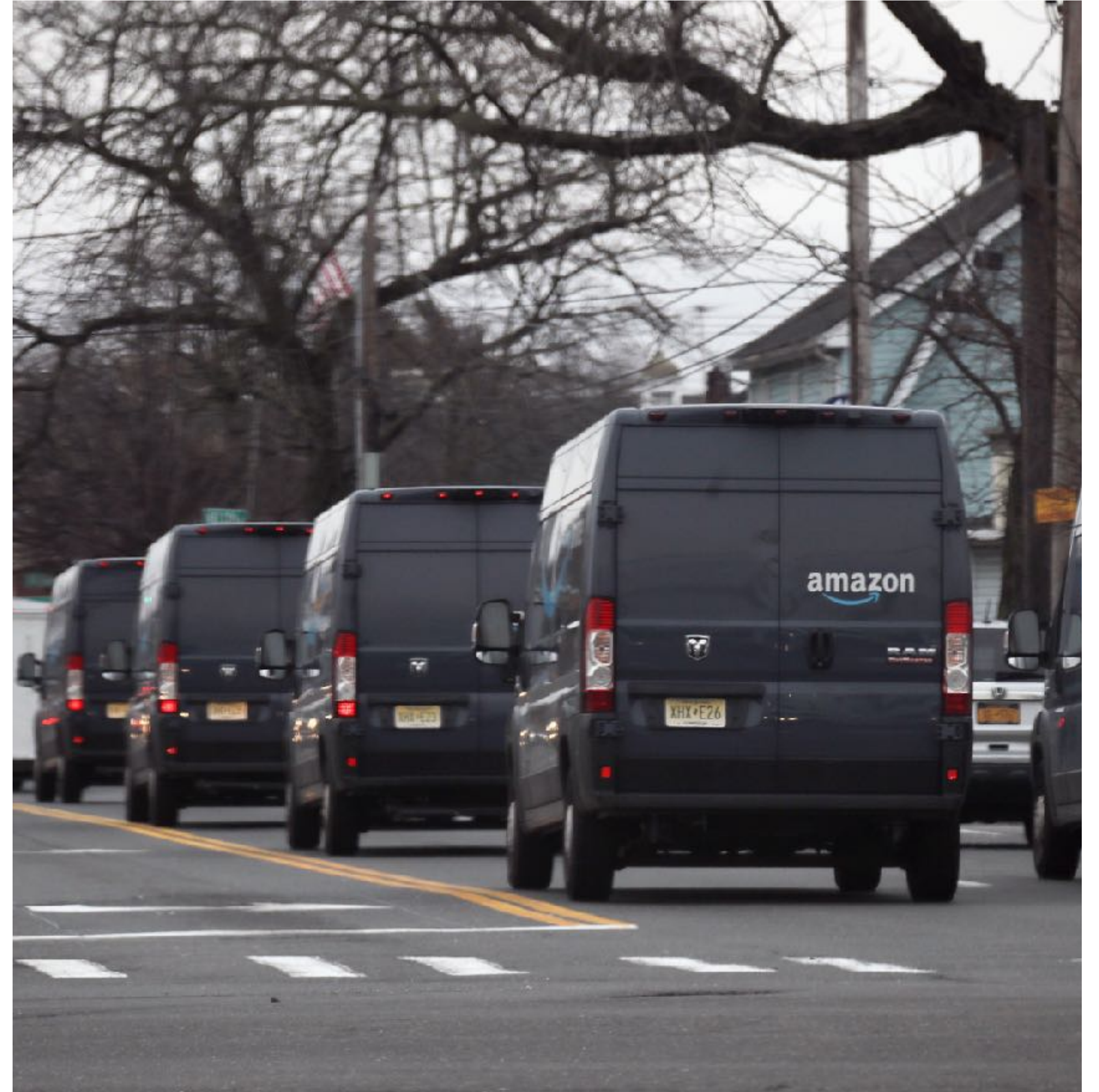
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Curb and Traffic Impacts

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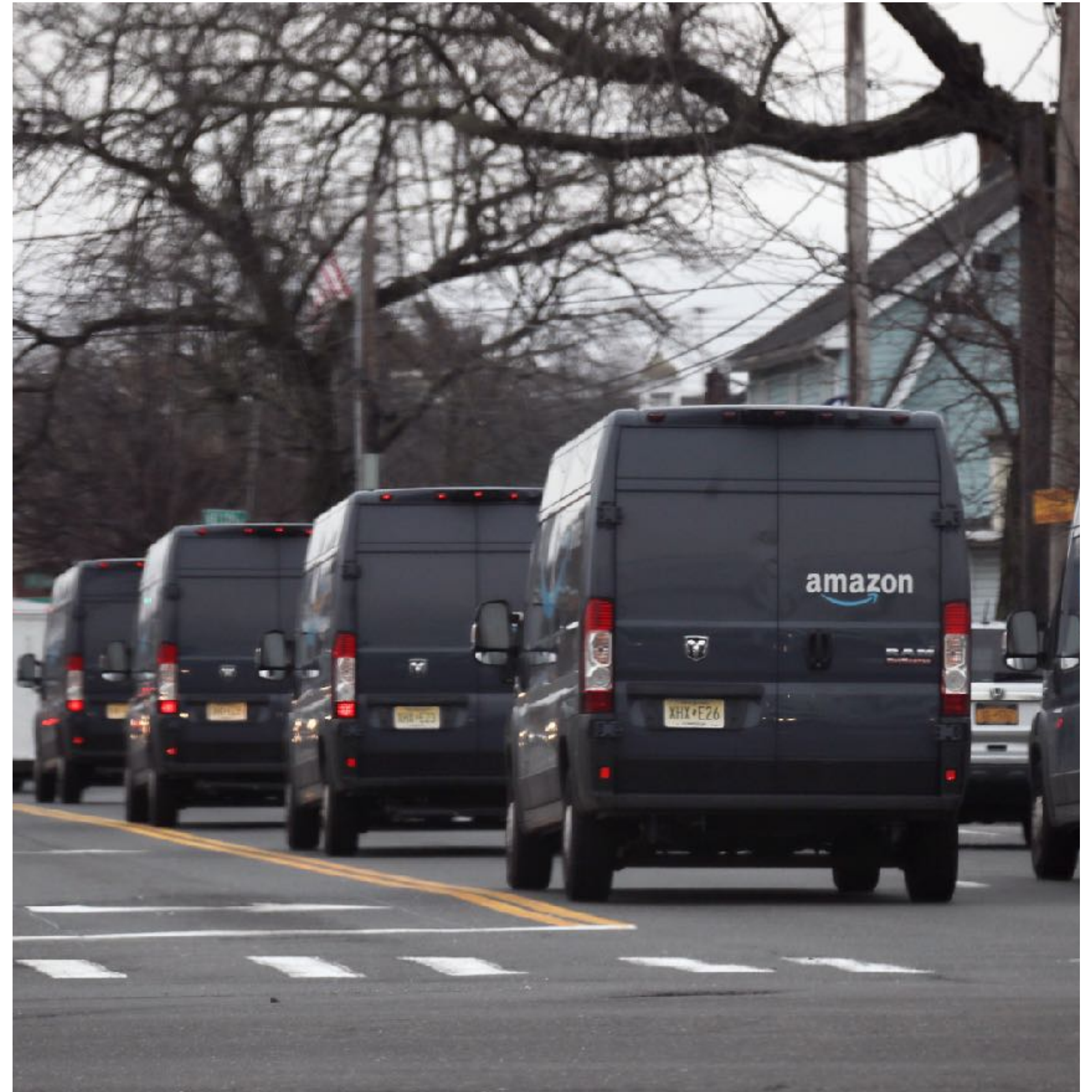
- More truck traffic, congestion



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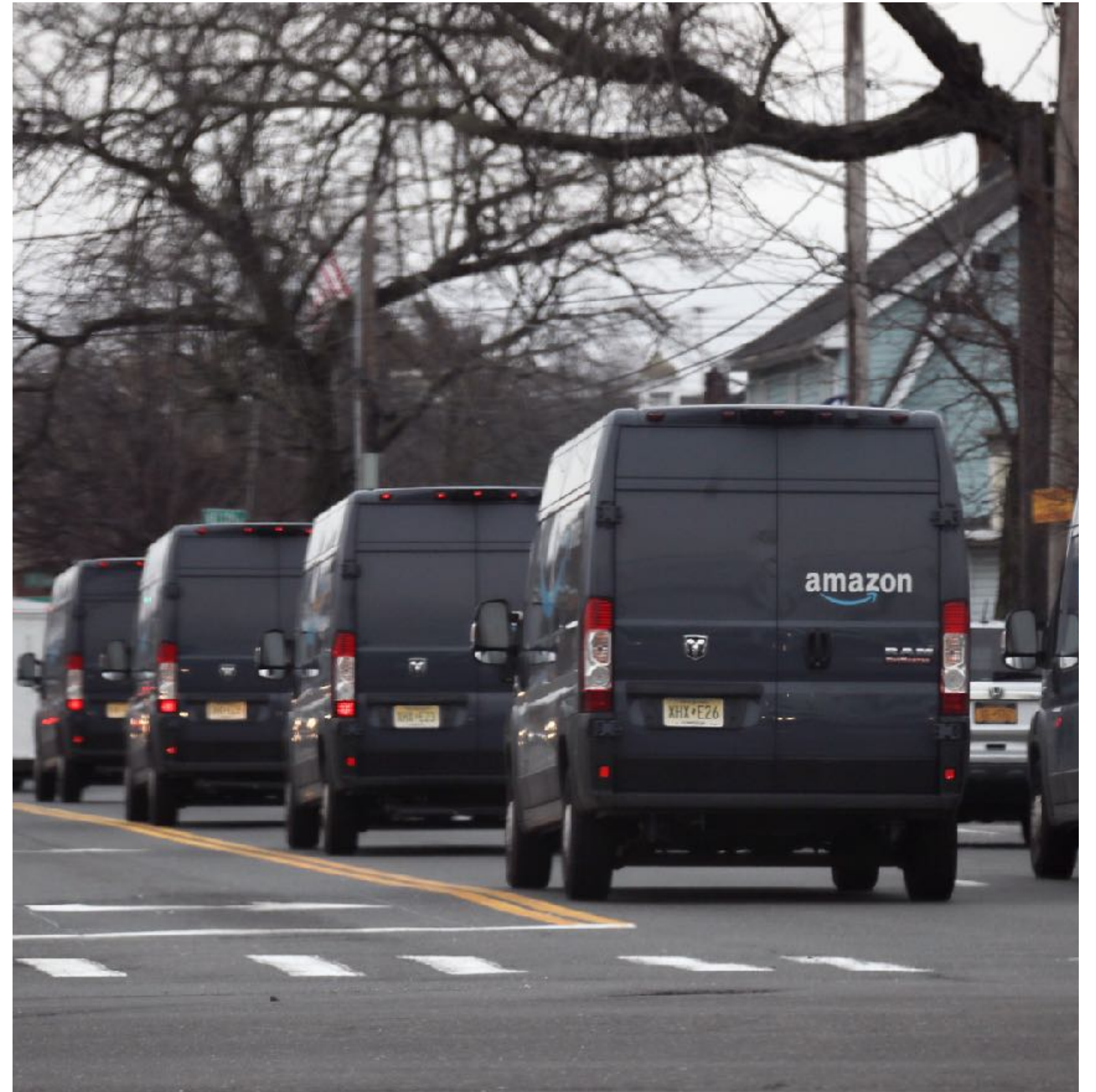
- More truck traffic, congestion
- More competition for the curb, parking



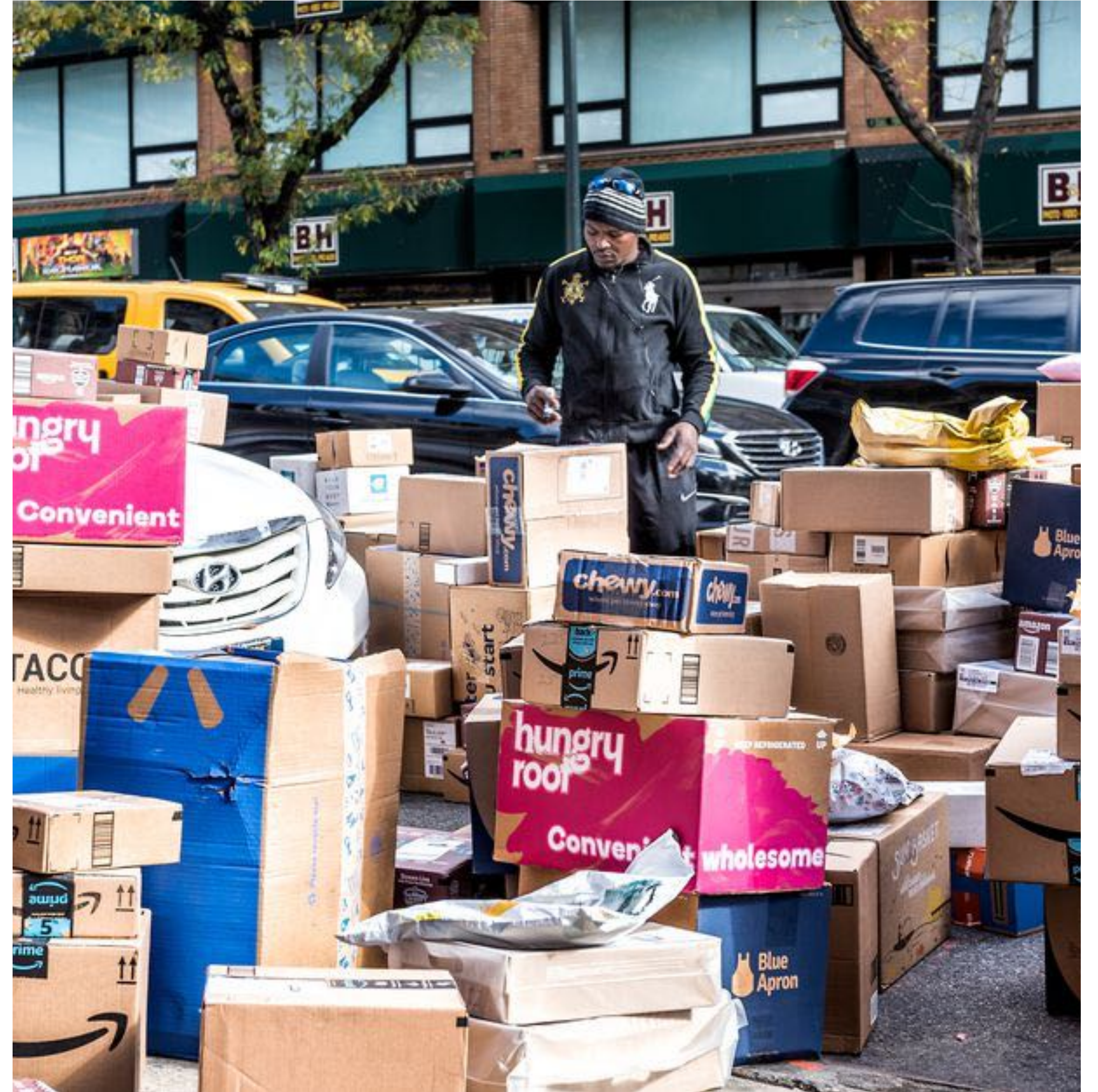
Curb and Traffic Impacts

More delivery vehicles means...

- More truck traffic, congestion
- More competition for the curb, parking
- More unauthorized parking behavior

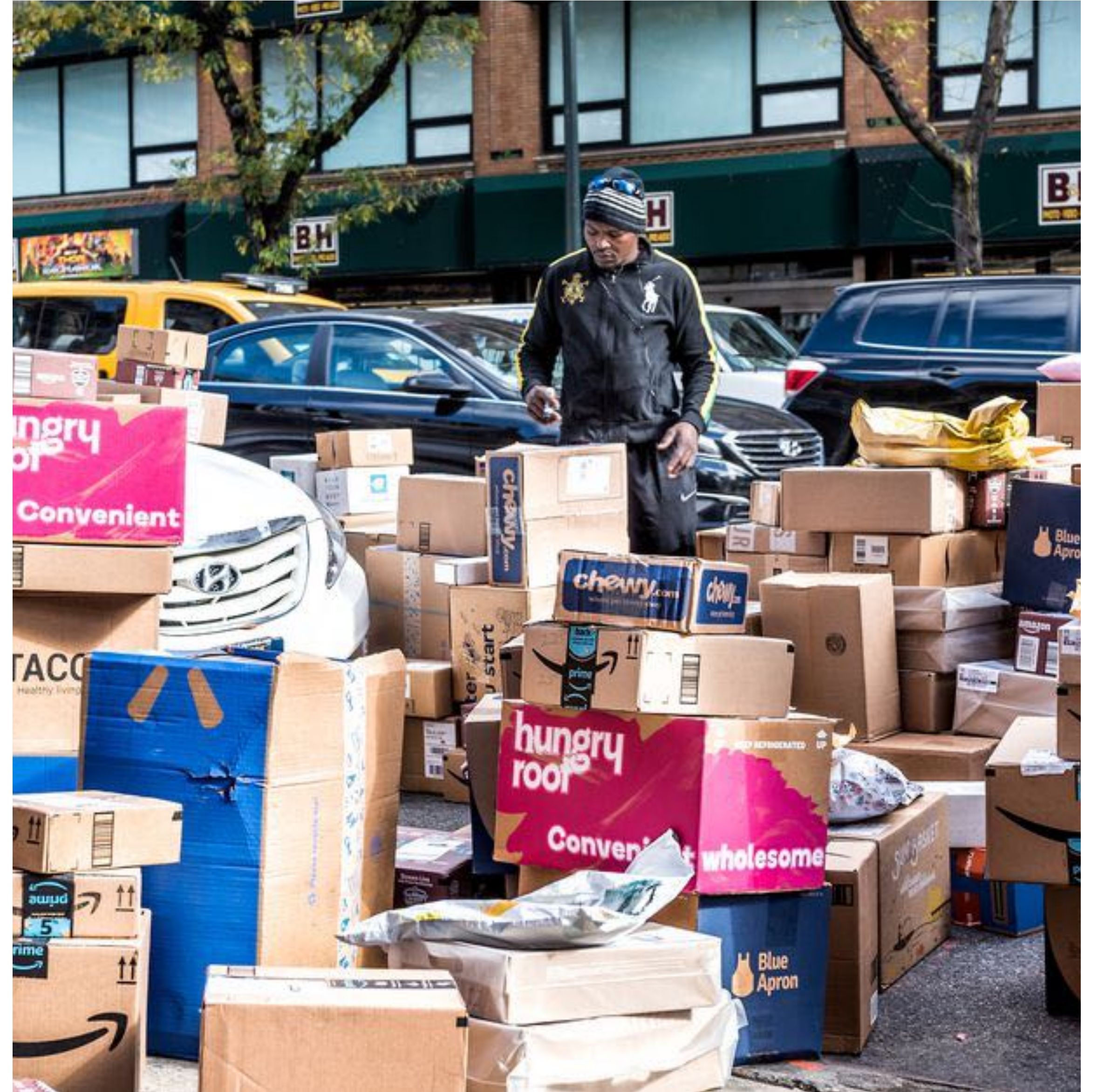


Impacts on Shipping Costs



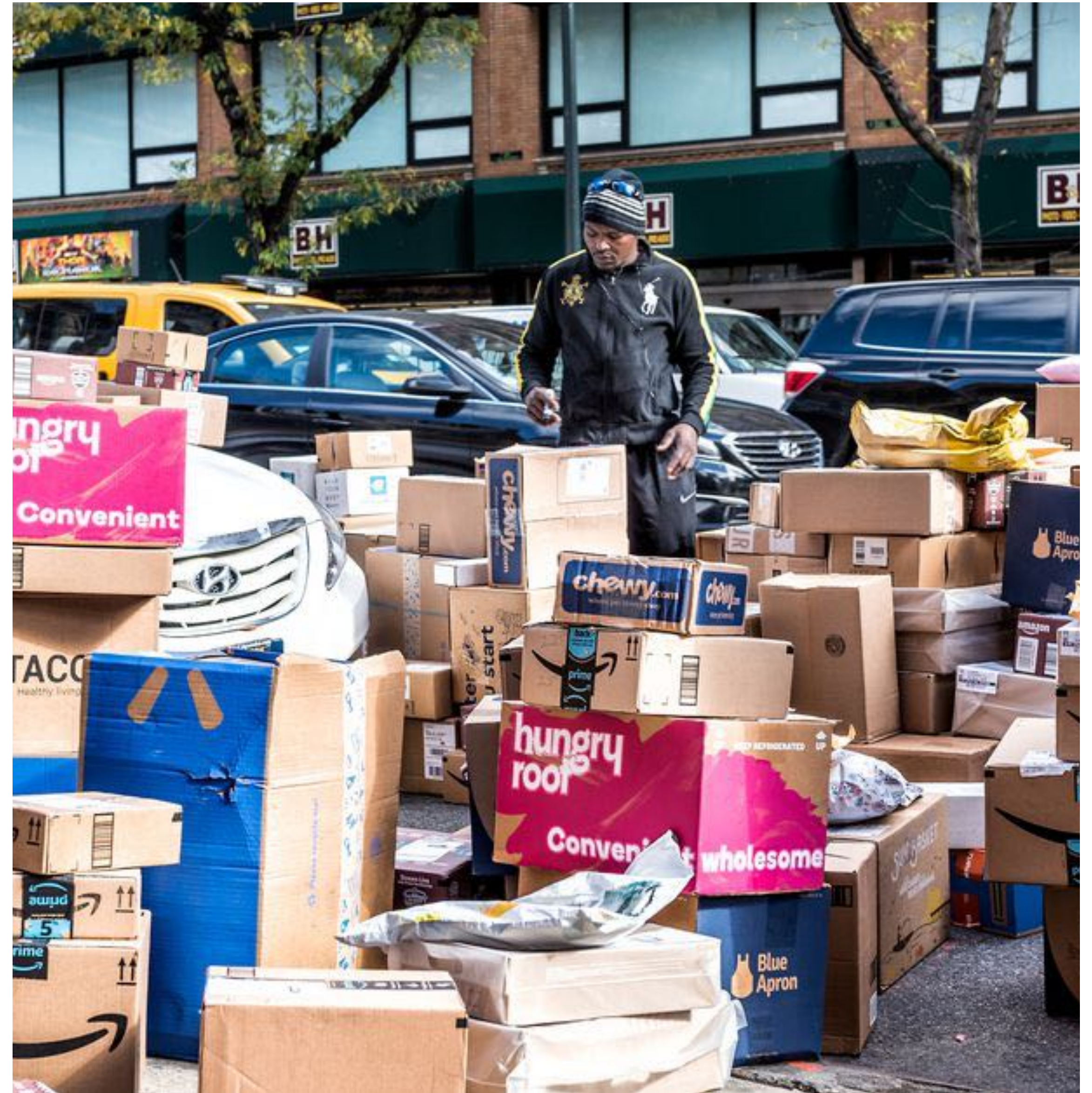
Impacts on Shipping Costs

- E-commerce ships to homes: Much costlier than shipping to centralized locations



Impacts on Shipping Costs

- E-commerce ships to homes: Much costlier than shipping to centralized locations
- Competition for curb and road space slows down deliveries, increases costs



Impacts on Safety



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- Commercial vehicle parking directly affects VRU behavior, safety
- Drivers become VRUs when they exit the truck



Impacts

Research Questions



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1. What are some key challenges delivery drivers encounter when delivering in urban areas?



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2. What strategies do drivers employ when parking their vehicles to make deliveries?
3. What reasons do drivers cite for engaging in unauthorized or questionable parking practices?



Data and Methods

Data Acquisition Difficulties

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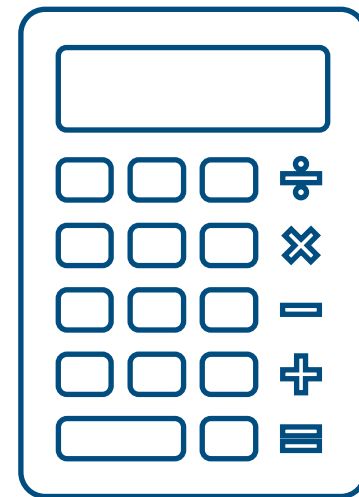
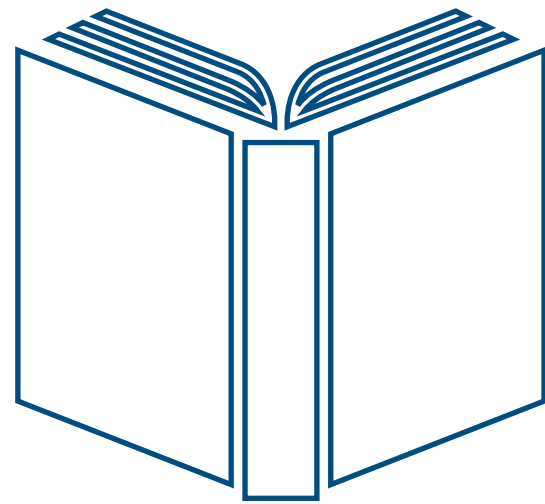
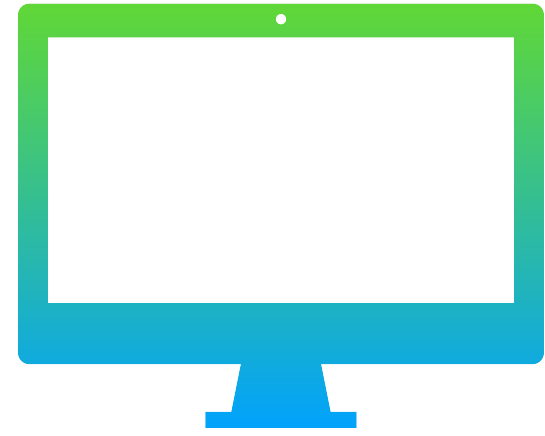
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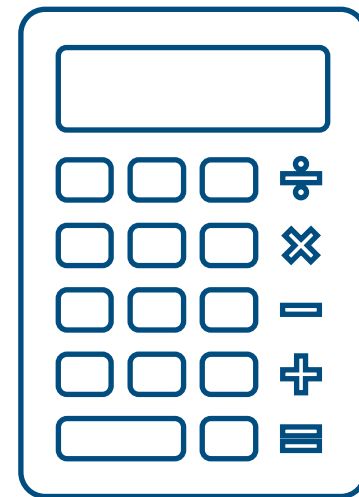
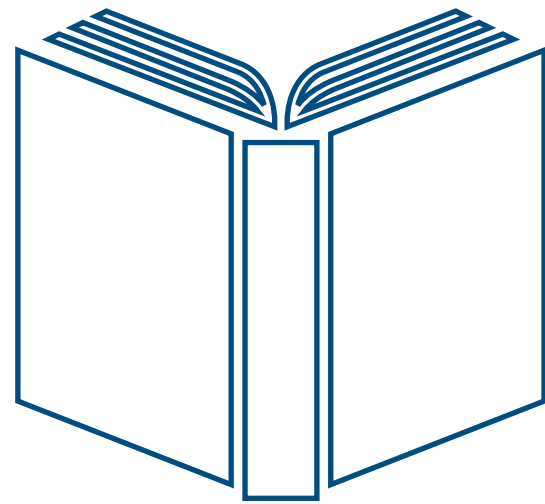
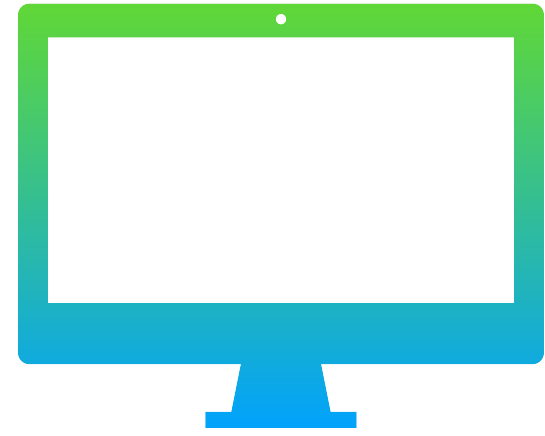
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Data and Methods

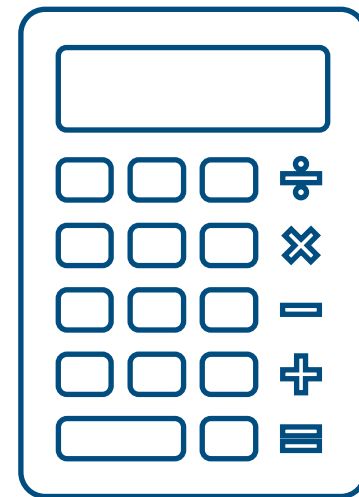
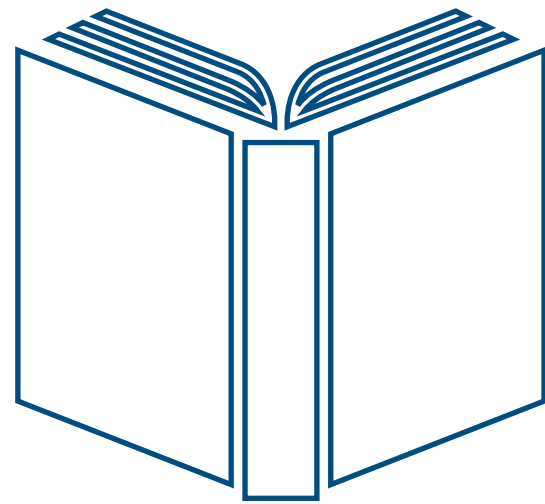
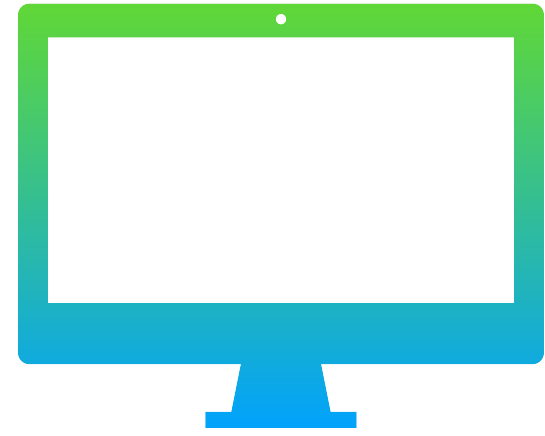


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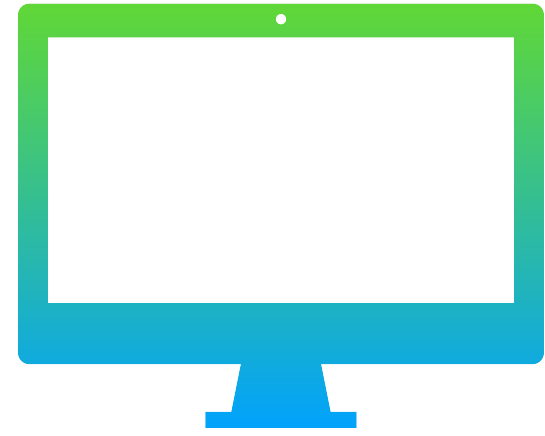


reddit

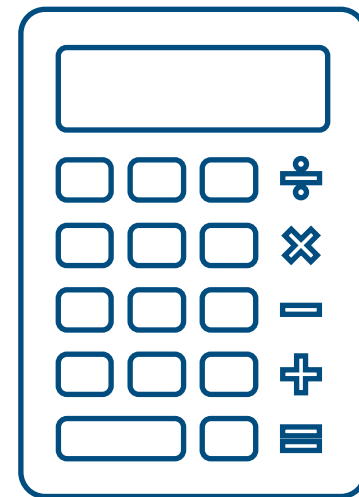
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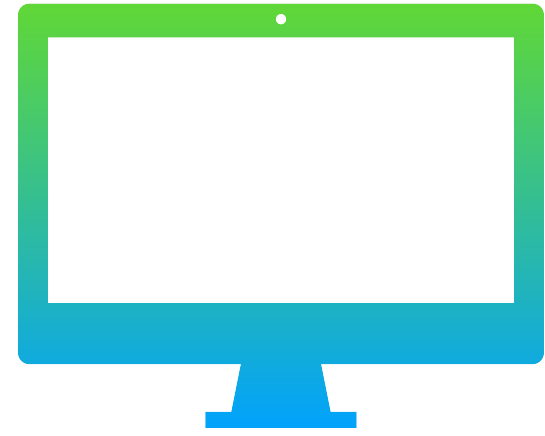
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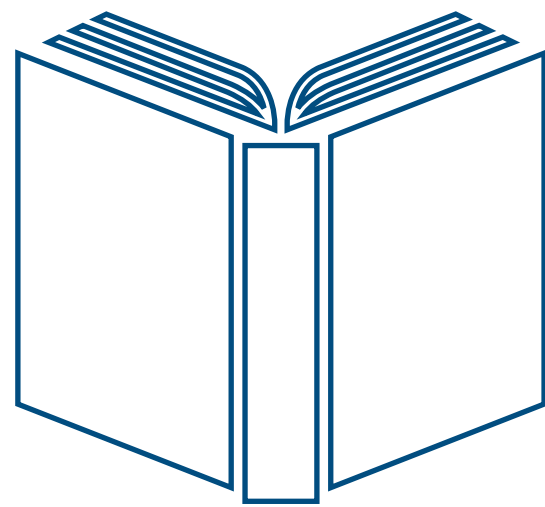
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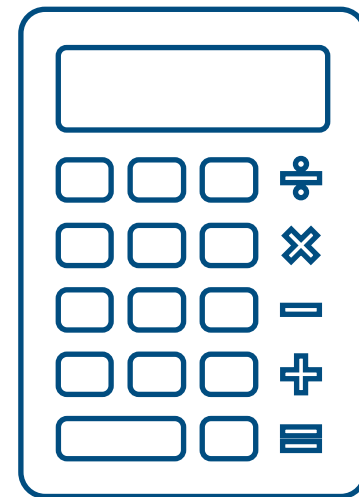
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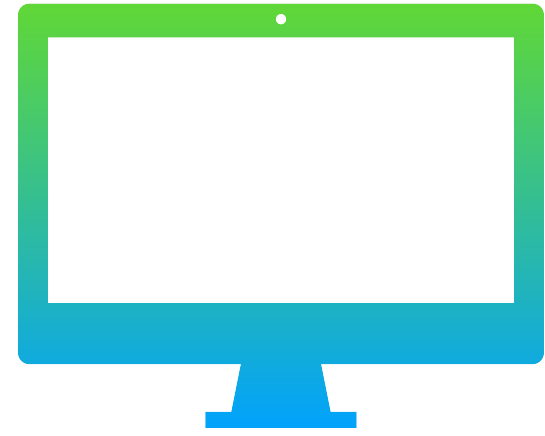
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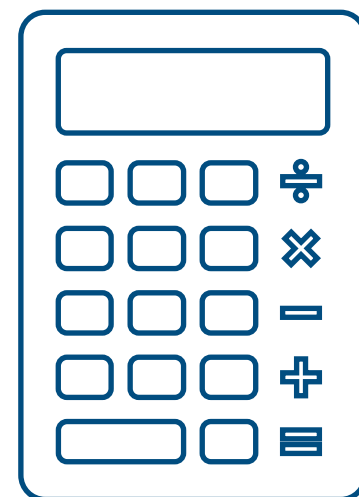


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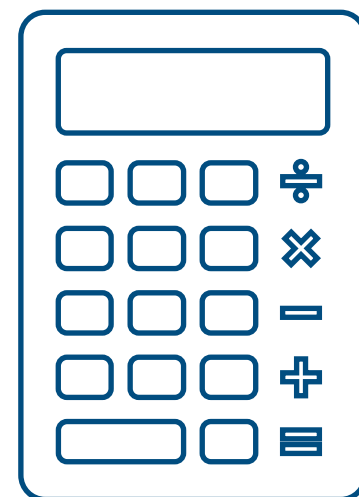
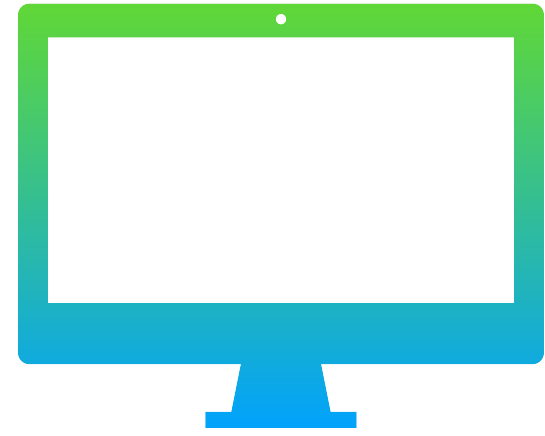


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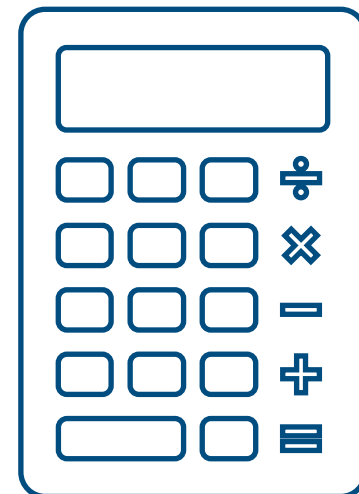
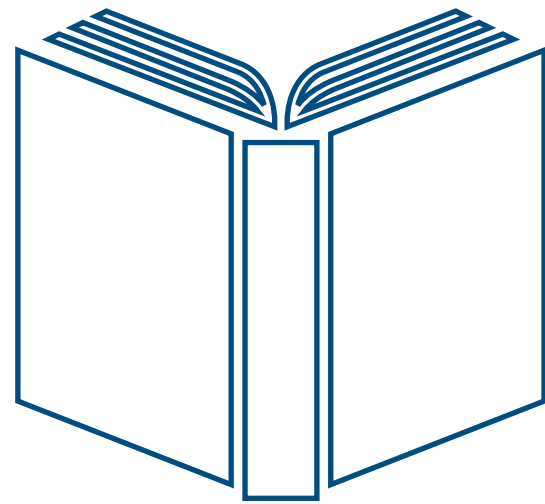
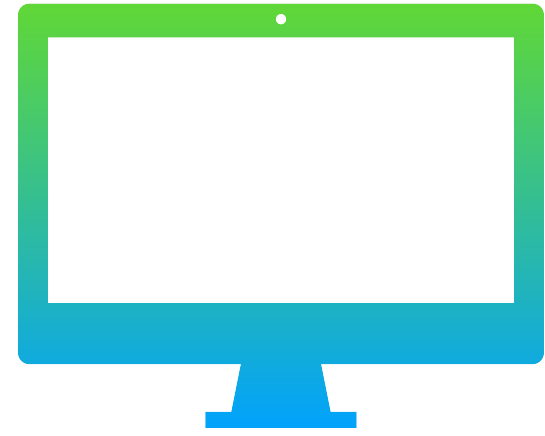


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- People post in specific communities called “subreddits”
- Others respond to the original poster (OP)
- Searched subreddits dedicated to employees of three major carriers

Data and Methods



Posted by [redacted] 10 months ago

5 Delivering in a downtown type area

Have a question. If you have a route that's downtown, with only 2 lanes and no where to park near the delivery destination. Do you just pull over as far as you can and turn your hazards on or find parking that's like a mile away?

Please give me some tips or pointers. Ive tried to see what the parking laws for delivery are but haven't had any luck. Maybe I'm overlooking.

8 Comments Share Save Hide Report 100% Upvoted

This thread is archived
New comments cannot be posted and votes cannot be cast

Sort By: Top (Suggested) ▼

[redacted] 10mo

Yeah- hazards on and I park where I want. As long as I'm not blocking entry and exit ways, someone's mailbox, someone's car.

I don't like downtown routes cause almost everything in DTPHX is one way and it pisses me off, or the damn construction. Anyway, I once parked in a no parking zone in front of four cops and I didn't get in trouble. Threw my hazards on, ran to the door and ran back ..so they knew I was working and trying to get in and out.

I don't think anyone would have an issue, if they do, they should really not take it up with you hah

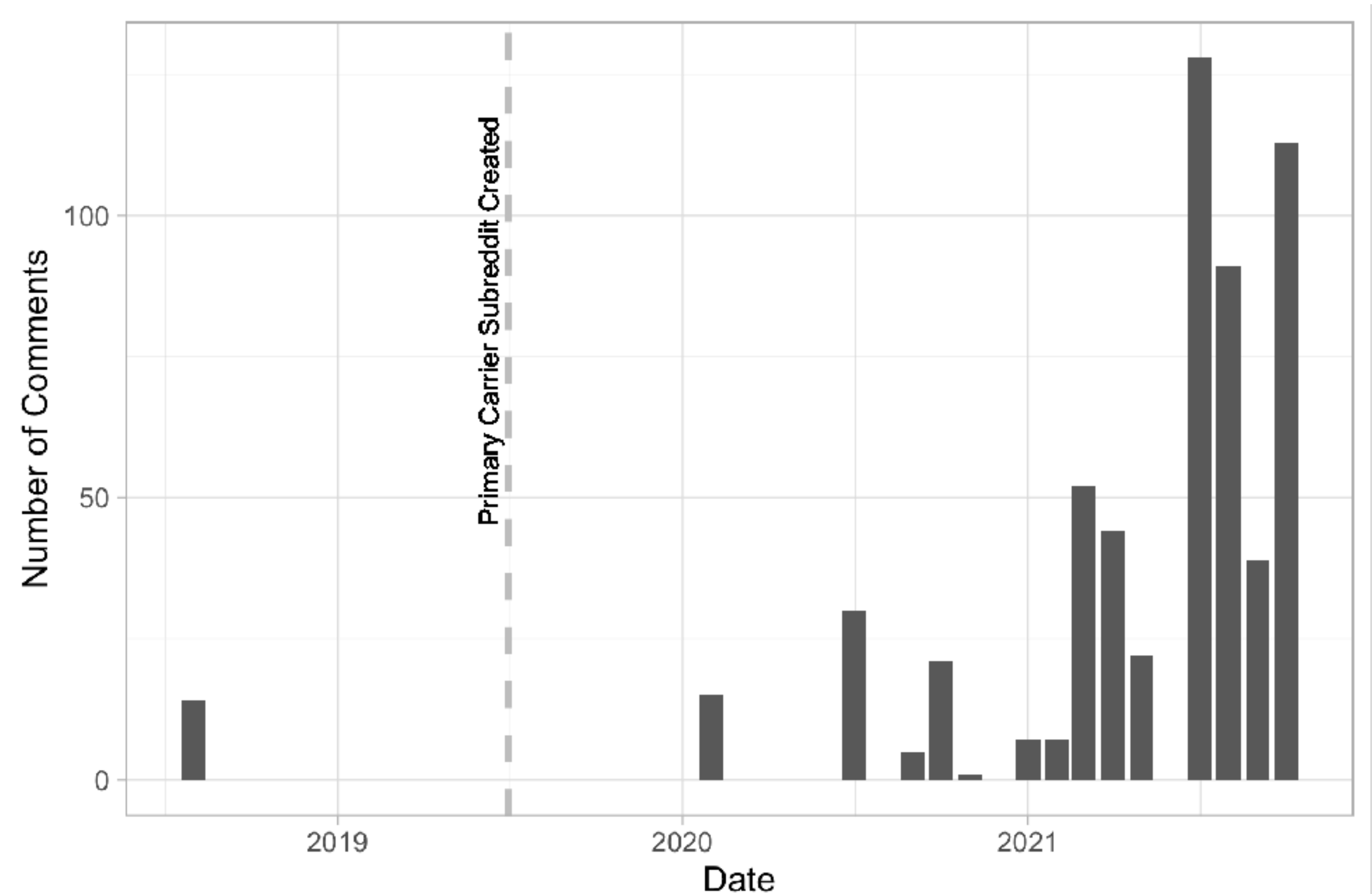
4 [redacted] Share Report Save

Data Overview

Data Overview

- $n = 589$ comments
- Posted between 08/14/2018 and 10/31/2021
- Increase in comments corresponds with growth of subreddits, delivery services
- Mostly from one carrier
- Posts are anonymous

Number of Comments in Dataset by Month Posted

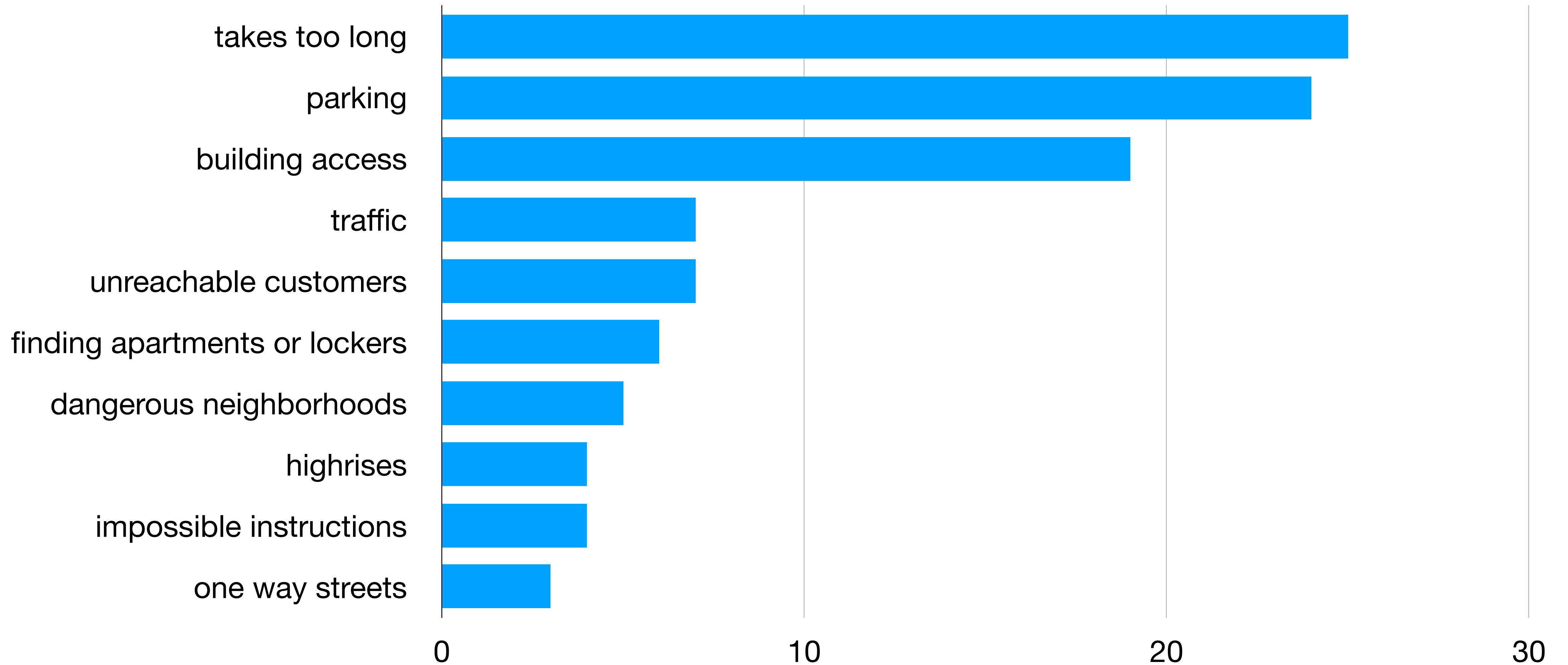


Urban Delivery Challenges

“Everybody who works this gig knows it's a gamble, and getting a downtown route is the opposite of hitting the jackpot. We have some overpopulated cities with horrible infrastructure and seemingly no accommodations for delivery personnel and their vehicles. [...] But honestly, what is to be done?”

allPostsID54

Challenges Delivering in Downtowns



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Takes Too Long

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Parking Difficulties

- Number one challenge: Delivering downtown “takes too long”
- Time difficulties caused by more specific challenges
- Number one specific challenge: Parking

Challenges Delivering in Downtowns

Takes Too Long

I only average about 12 or 14 stops an hour in the city. Wanna do better its really not an organization issue but more of a driving and distance from my van to the stop issue. I typically average 20-24 in the suburbs.
(allPostsID28)

Challenges Delivering in Downtowns

Takes Too Long

Trying to get ideas on how to consistently do more than 12 stops an hr downtown. How do you deal w call boxes you constantly have problems with? How long does it take you to organize a highrise and go floor to floor on average? [...] I spent 20 minutes organizing by floor and delivering 10 stops in a high rise. (allPostsID24)

Challenges Delivering in Downtowns

Takes Too Long

[...] [COMPANY] completely overloads us on these downtown routes. Usually 40+ packages for a 4.5 hr block. So, traffic can make a 5 min distance turn into a 15 min distance, and the task of finding parking can add another 10 minutes. Then walking to the building would be some more. And then the story of gaining access. [COMPANY] has been around for years, so why is it still so bad? Does anyone know if anything is even being done about this? (allPostsID54)

Challenges Delivering in Downtowns

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If you have a route that's downtown, with only 2 lanes and nowhere to park near the delivery destination. Do you just pull over as far as you can and turn your hazards on or find parking that's like a mile away?

(allPostsID26)

Challenges Delivering in Downtowns

Parking Difficulties

“[COMPANY] was parked in the only "delivery only" spot behind me followed by a police car. [COMPANY] was parked in front in a no parking zone. The only available spot for me was a metered parking spot. I parked in the metered spot and turned on my flashers. I have no identifiable sign on my car. Is risking a parking ticket just what we do or what do you think?” (allPostsID61)

Parking Strategies



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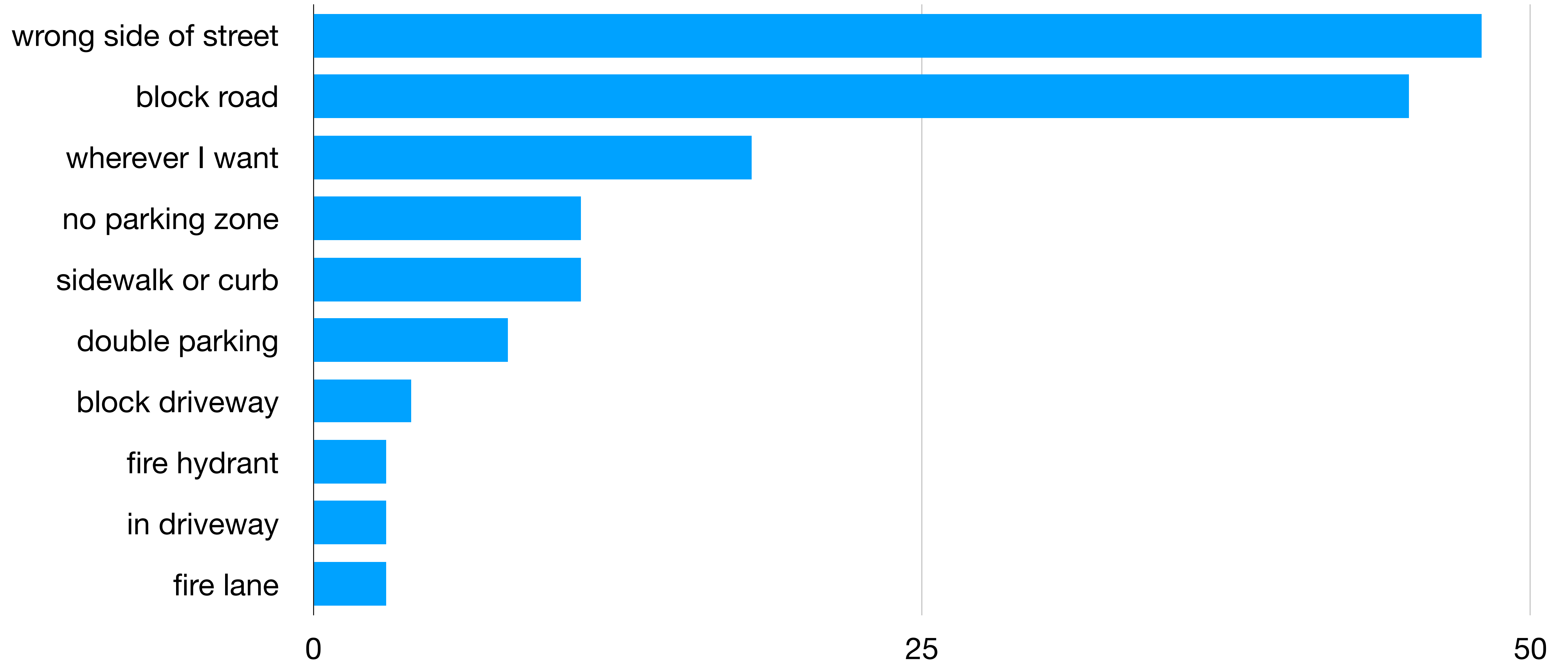
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 - Use loading zones when possible (n=9)
- Legal parking not always possible, pragmatic



Unauthorized Parking

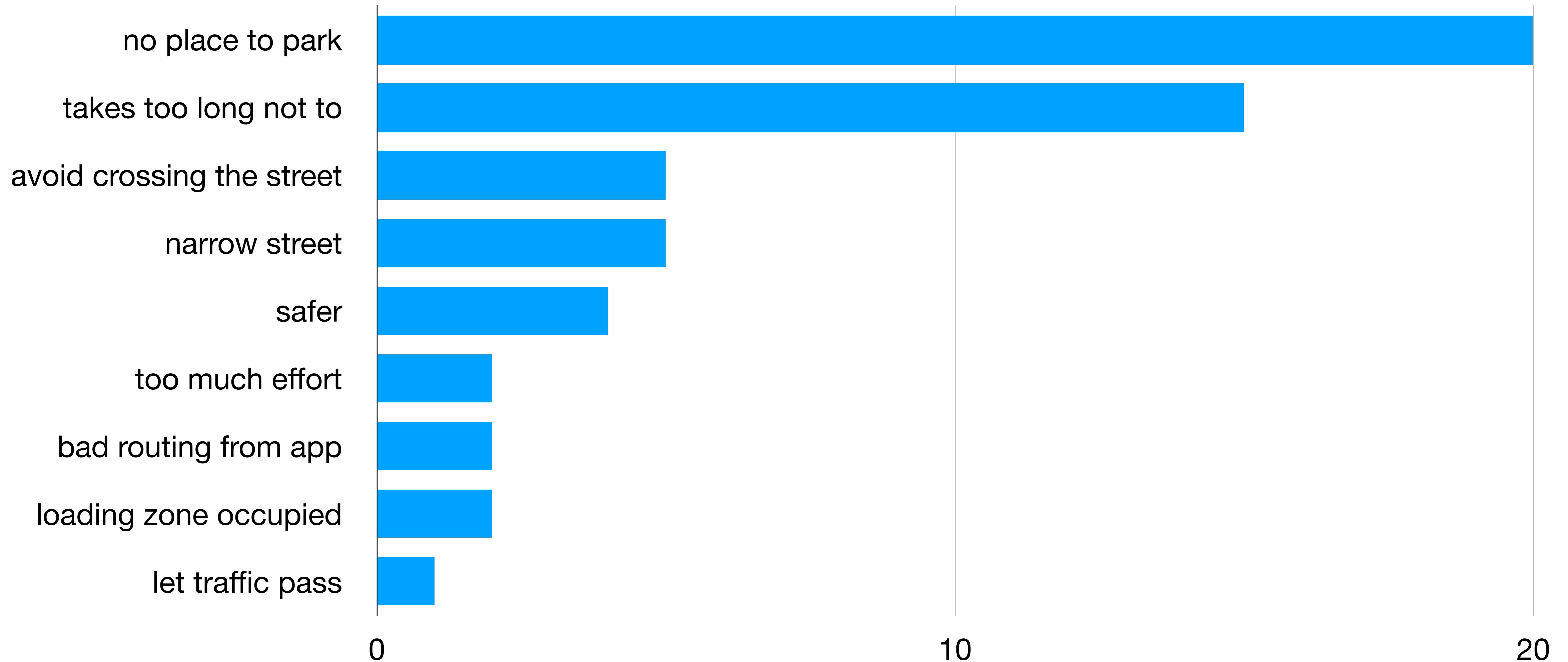
Types of Unauthorized Parking

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Reasons Discussed for Unauthorized Parking

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Rationale for Unauthorized Parking

No place to park

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 - Time spent finding parking
 - Safety issues

Rationale for Unauthorized Parking

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“[Because there is no parking] ... many times we are forced to park illegally for [COMPANY]'s sake, which obviously is not right and feels horrible.”
(allPostsID54)

Rationale for Unauthorized Parking

No place to park

“Obviously if I can't [find parking] I am going to be forced to double park or whatever” (allThreadsID1402)

Rationale for Unauthorized Parking

No place to park

“I don't even care about the laws. I've blocked the whole-a** street before; anyone who has something to say about it can get lost. When I parallel park, I do it because it is the easiest option and I don't want to cart 30 packages down 2 city blocks. In a lot of cases it's the ONLY option.”
(allThreadsID685)

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“[U]sually I try to be a nice and courteous driver, but when I'm downtown I have to be an a**hole or else I can't get everything delivered in time.”
(allThreadsID685)

Rationale for Unauthorized Parking

Takes too long not to

“If I parked legally every time I would always be going over.”
(allThreadsID1410)

Rationale for Unauthorized Parking

Takes too long not to

“You mean you don't park in the opposite side? That's how you shave time off routes” (allThreadsID1950)

Rationale for Unauthorized Parking

Safer

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“I’ve almost been hit twice trying to cross a busy road. I would rather be fired or ticketed than die holding a[n] [COMPANY] package,”
(allThreadsID2010)

Rationale for Unauthorized Parking

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“I'm personally not interested in getting hit by some s***head on their cellphone and the less time I spend crossing streets the less likely that is to happen.” (allThreadsID2010)

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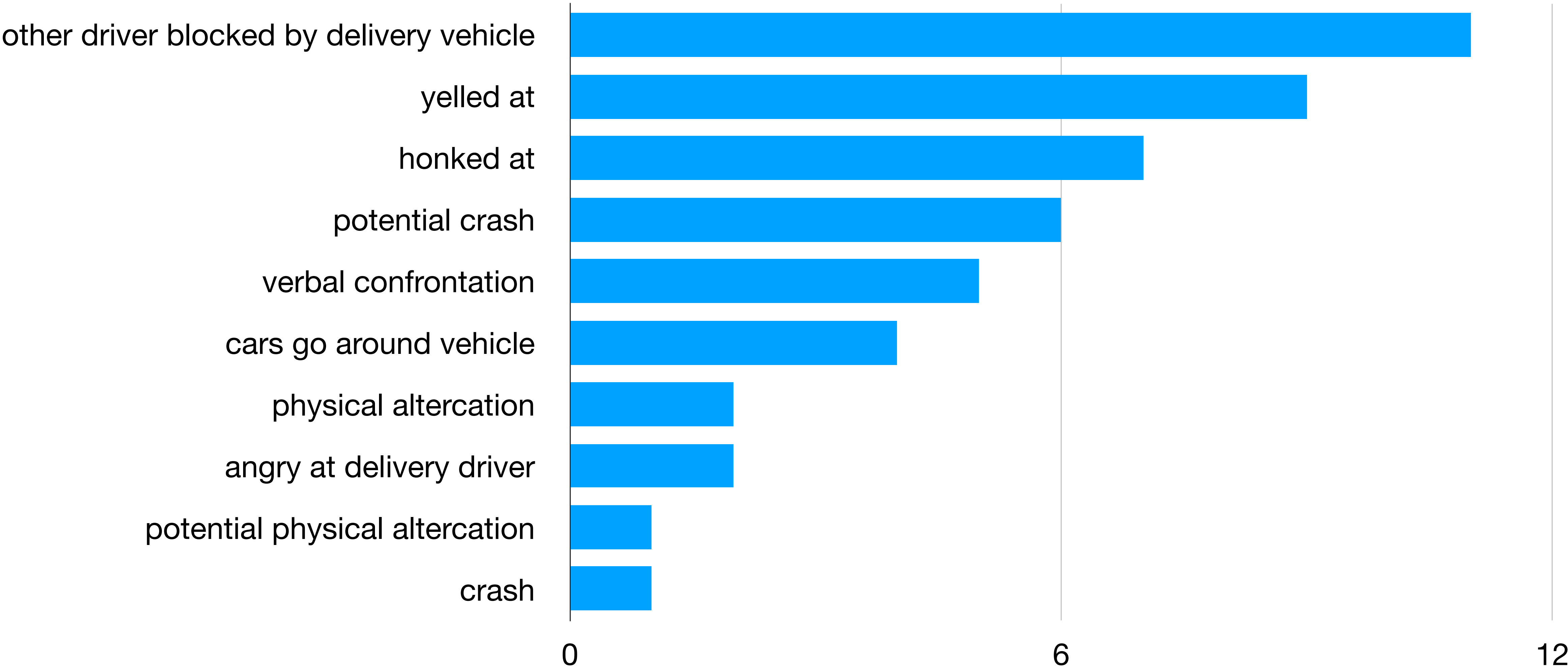
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“99% of the drivers I know will only block traffic if there is absolutely no other option. It's almost never done maliciously or for the driver's convenience. I will often break rules or inconvenience myself to ensure the safety of everyone on the road with me and have gotten a tongue lashing from customers/bystanders for it. Whether it's pulling into a driveway backwards or parking on the wrong side of the street in some cases, usually I'll give push back to anyone who gives me s*** for putting safety first.” (allThreadsID2092)



Interactions with Other Road Users

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Interpersonal Conflicts

Safety Issues

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 - Can sometimes be unsafe (e.g., physical altercations)
 - Focus: Delivery conditions, especially parking conditions, set up high-risk situations

Interactions with Other Road Users

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“When you are parked on a busy road do you ever think this could be the day a driver rear ends the van and kills me?” (allPostsID78)

Interactions with Other Road Users

Safety Issues

“I’m standing in the back of the van hearing cars and trucks whip past and praying I don’t rag doll like an unsecured box,” (allThreadsID1912)

Interactions with Other Road Users

Safety Issues

“Nope. But, I did wonder if I would get hit by a car getting out of the van sometimes” (allThreadsID1926)

Interactions with Other Road Users

Safety Issues

“We actually had a guy who was getting a package in the back and someone hit the van from behind at ab[out] 40 mph”
(allThreadsID1932)

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- Many drivers did not enjoy being assigned downtown routes, consider them long and difficult
- Parking is viewed as a major challenge
- Corroborate evidence that parking for commercial vehicles (CV) is undersupplied
- Results in unauthorized parking

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- Safety implications:
 - Drivers are concerned for their own safety
 - Regular operating practices create unsafe situations (for drivers and others)

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 - Low-cost freight demand management strategies
 - e.g., common carrier lockers, pick-up points

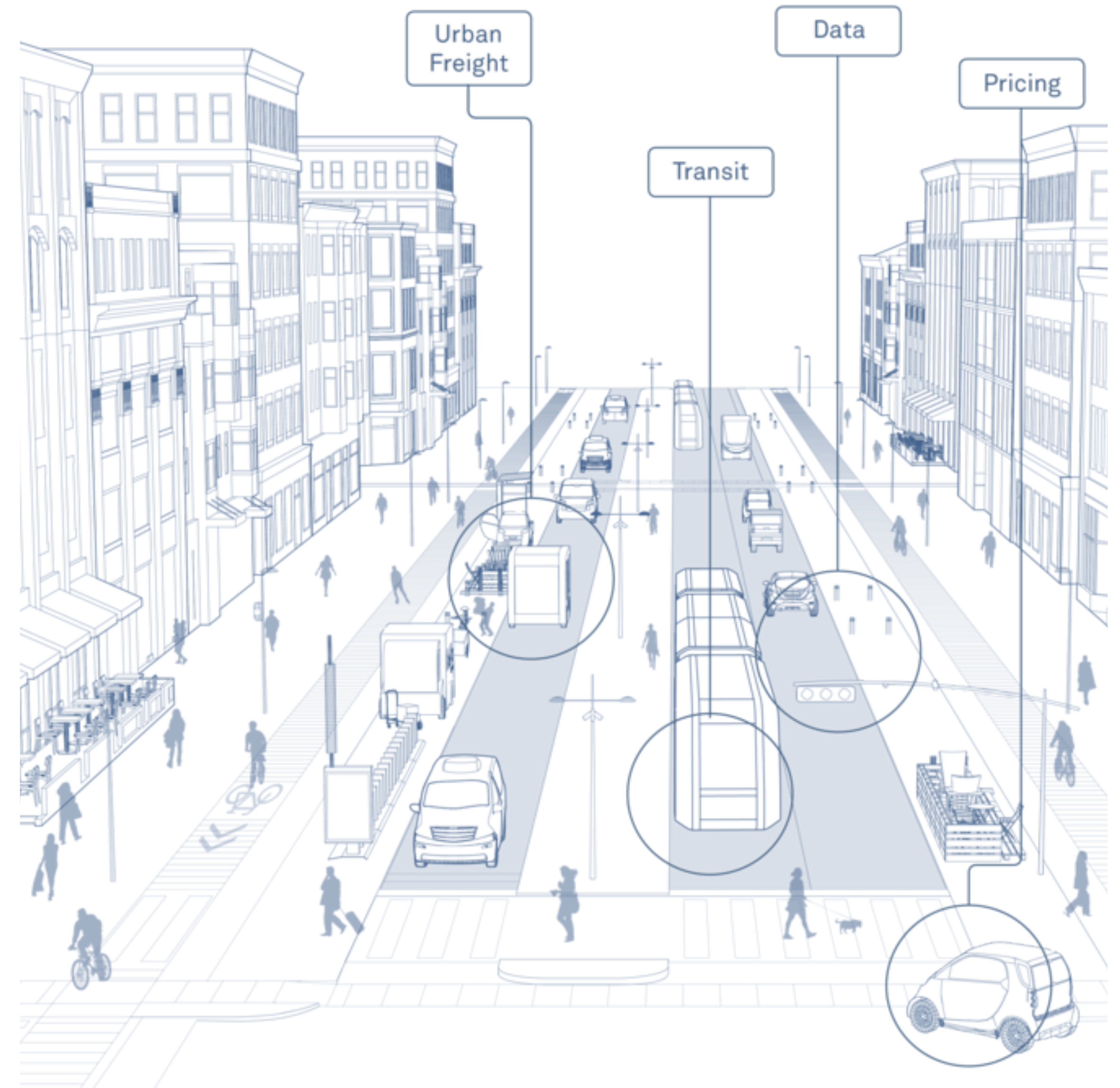


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- Short term:
 - Add CV loading zones to commercial blocks
 - Time limits, enforcement
 - Low-cost freight demand management strategies
 - e.g., common carrier lockers, pick-up points
 - Awareness in planning!

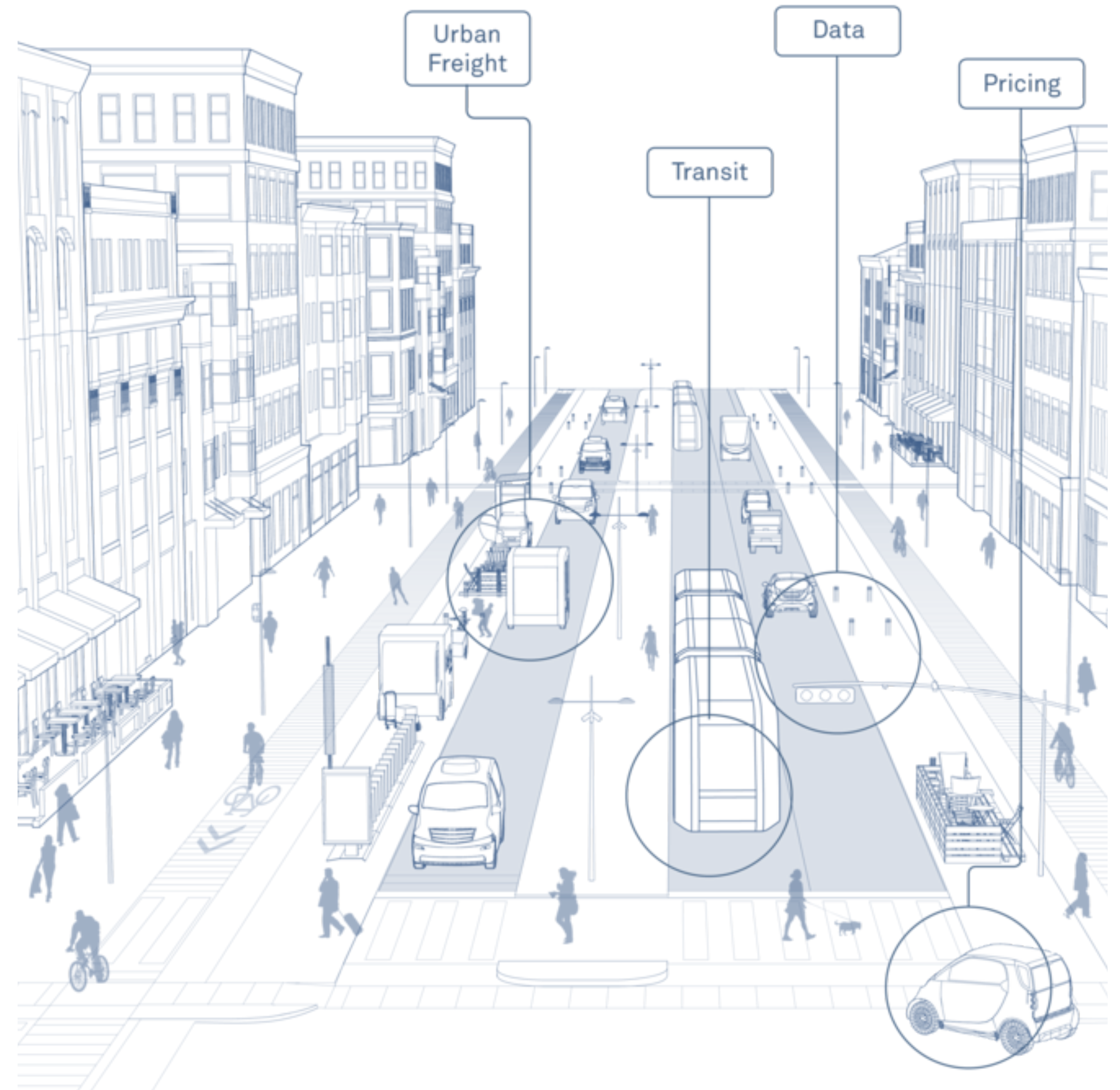


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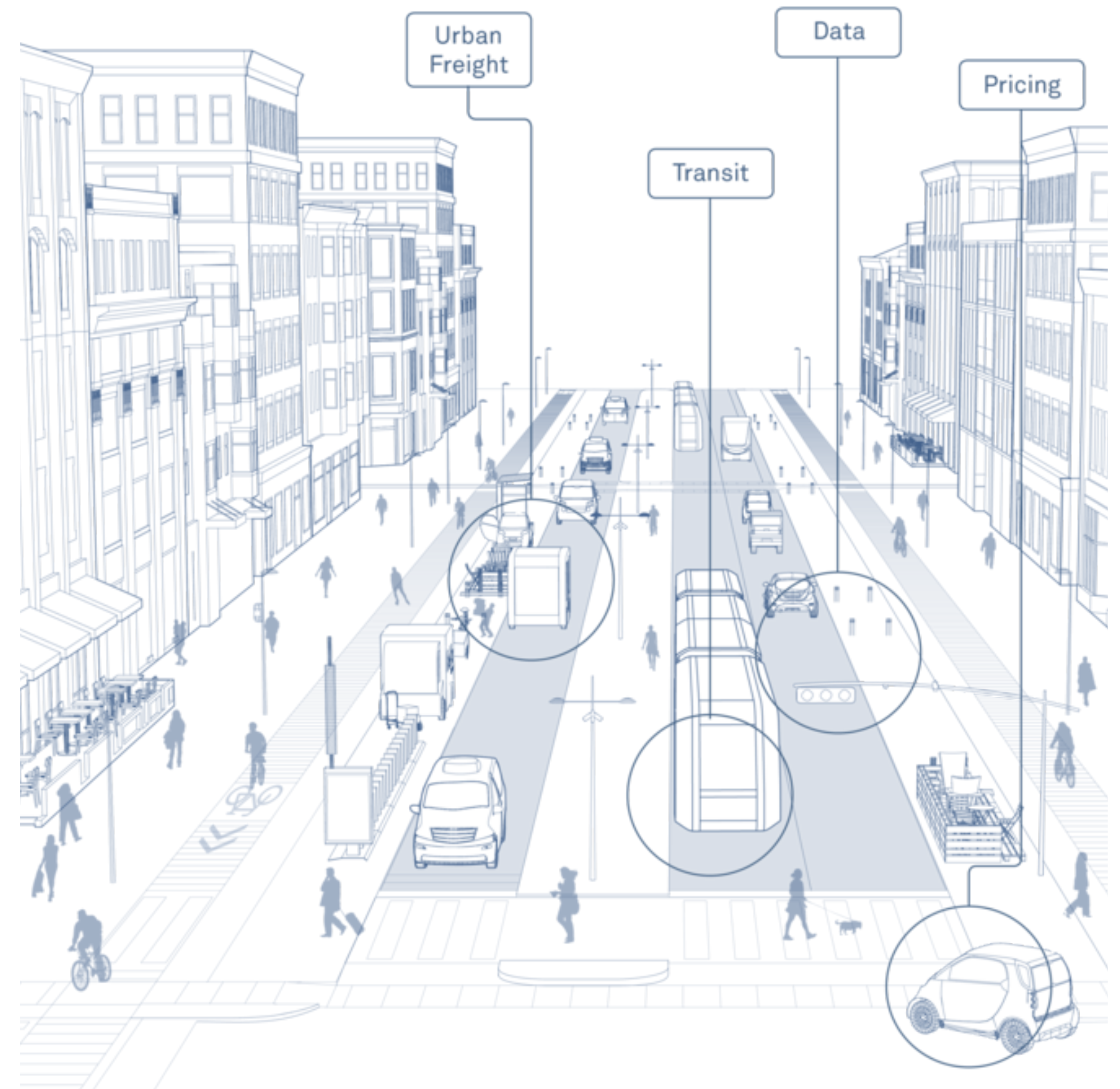
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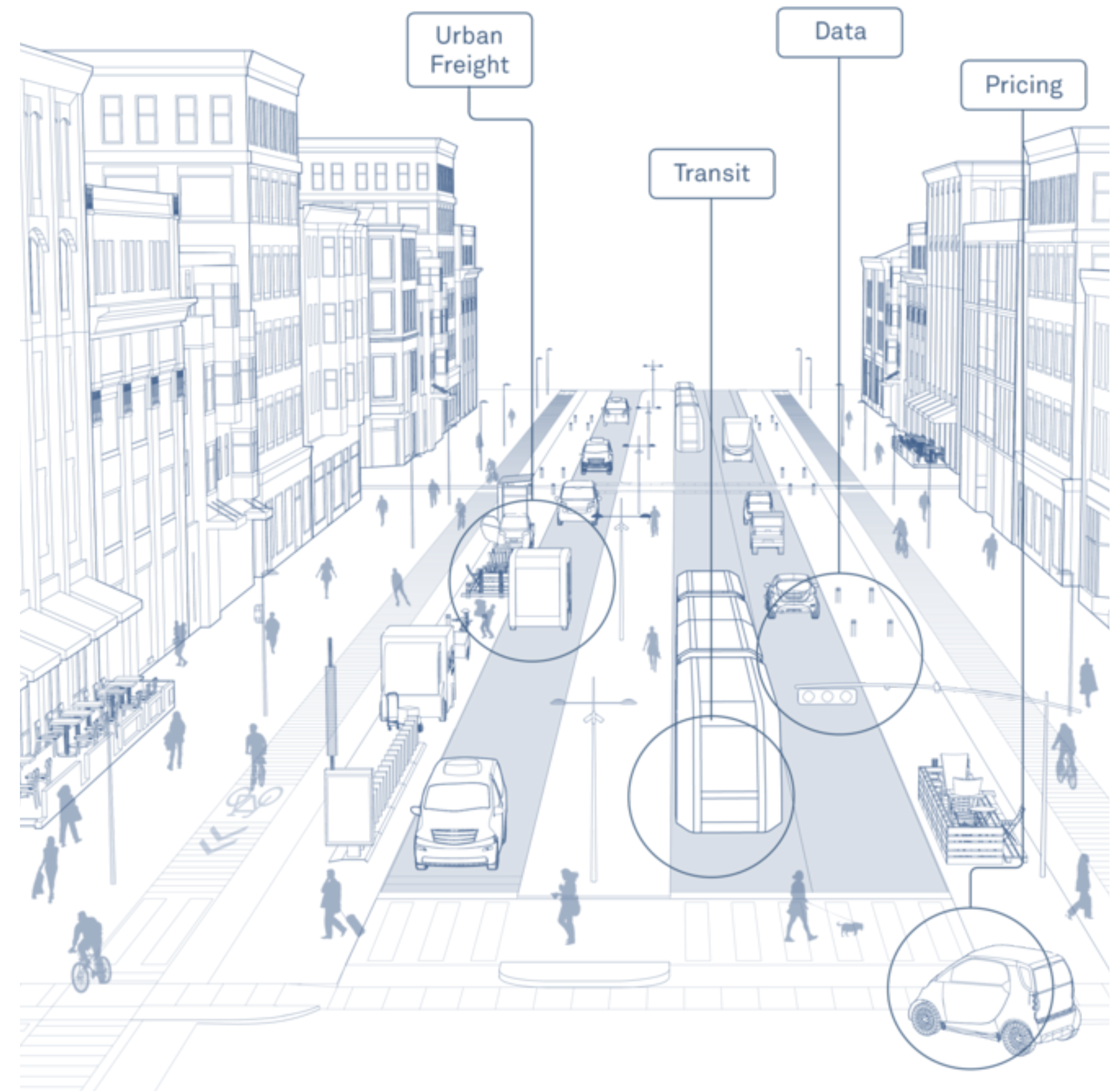
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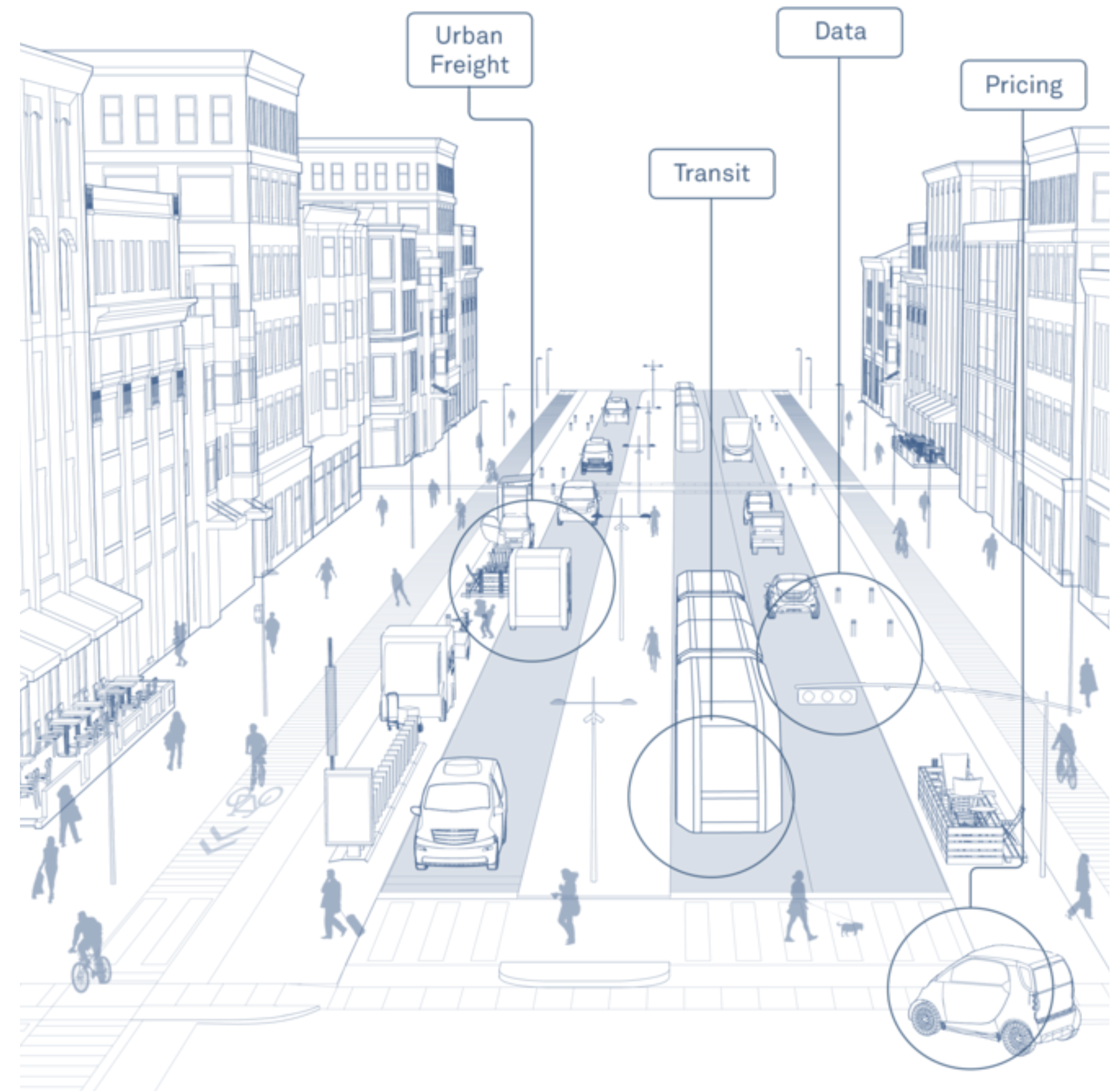
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 - Zoning codes could require minimum off-street loading zones
 - Vision zero plans are adapting to freight, should continue

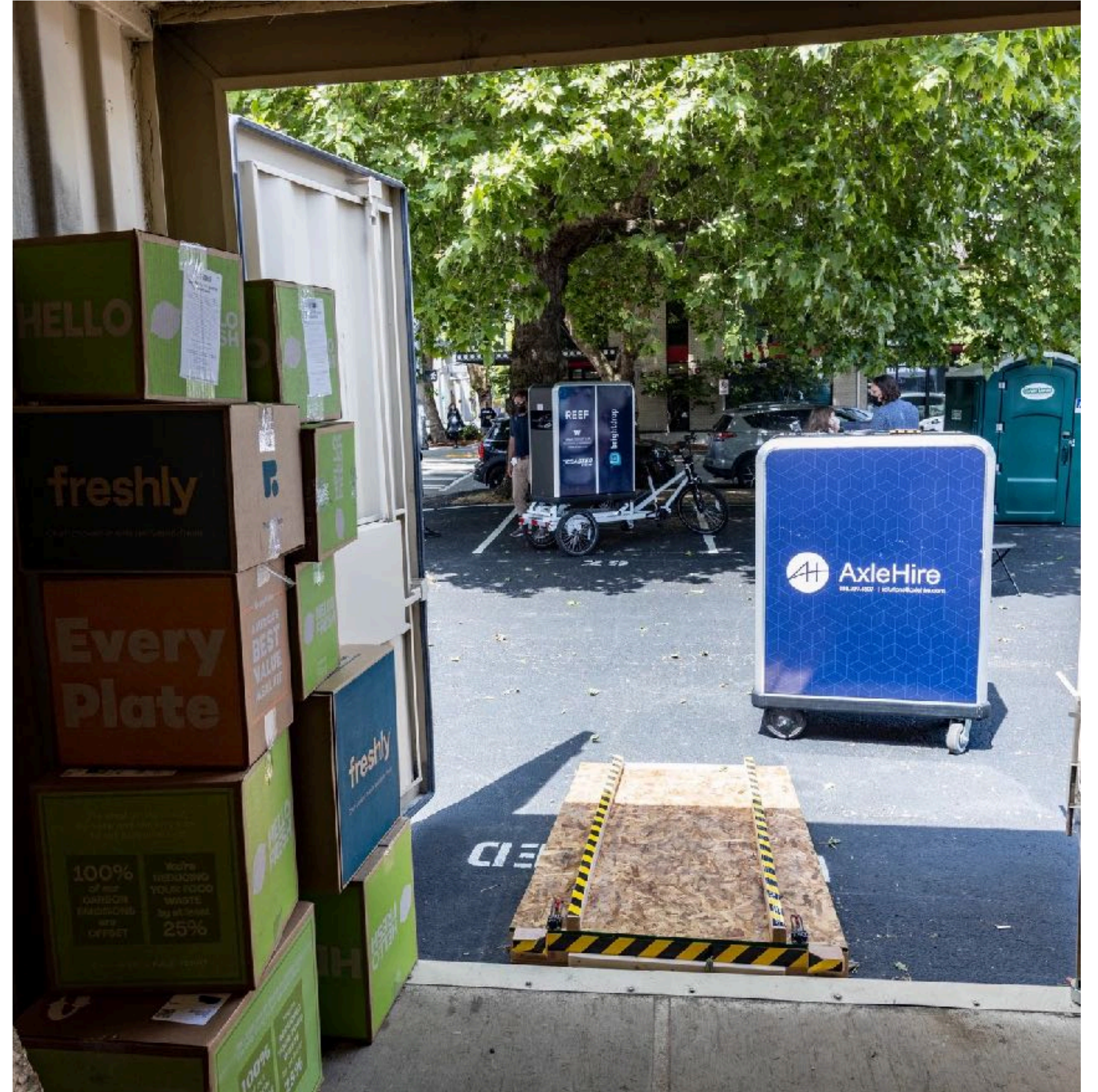


Policy Implications

- Longer term:
 - Zoning codes could require minimum off-street loading zones
 - Vision zero plans are adapting to freight, should continue
 - Comprehensive freight planning, street design

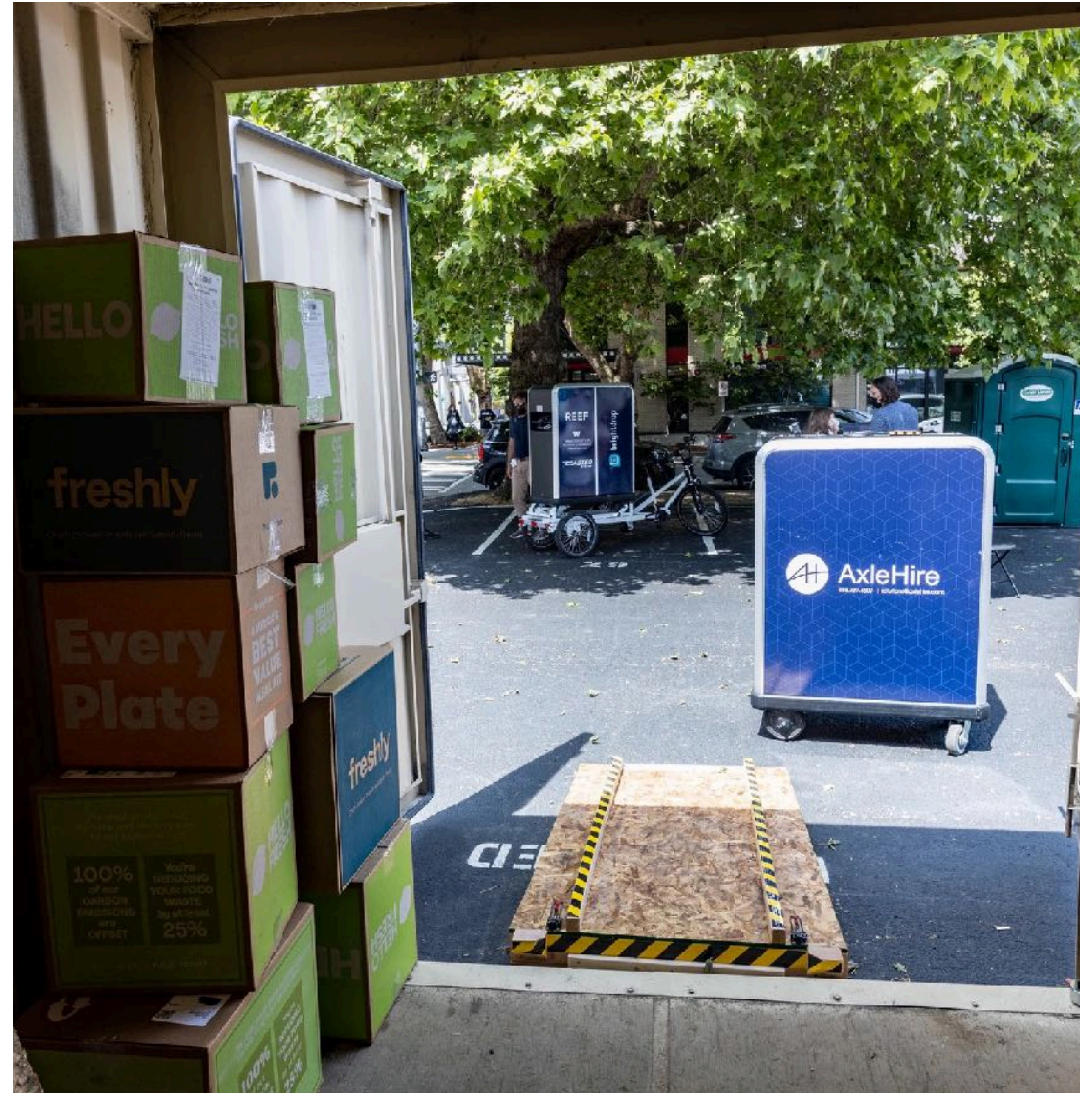


Policy Implications



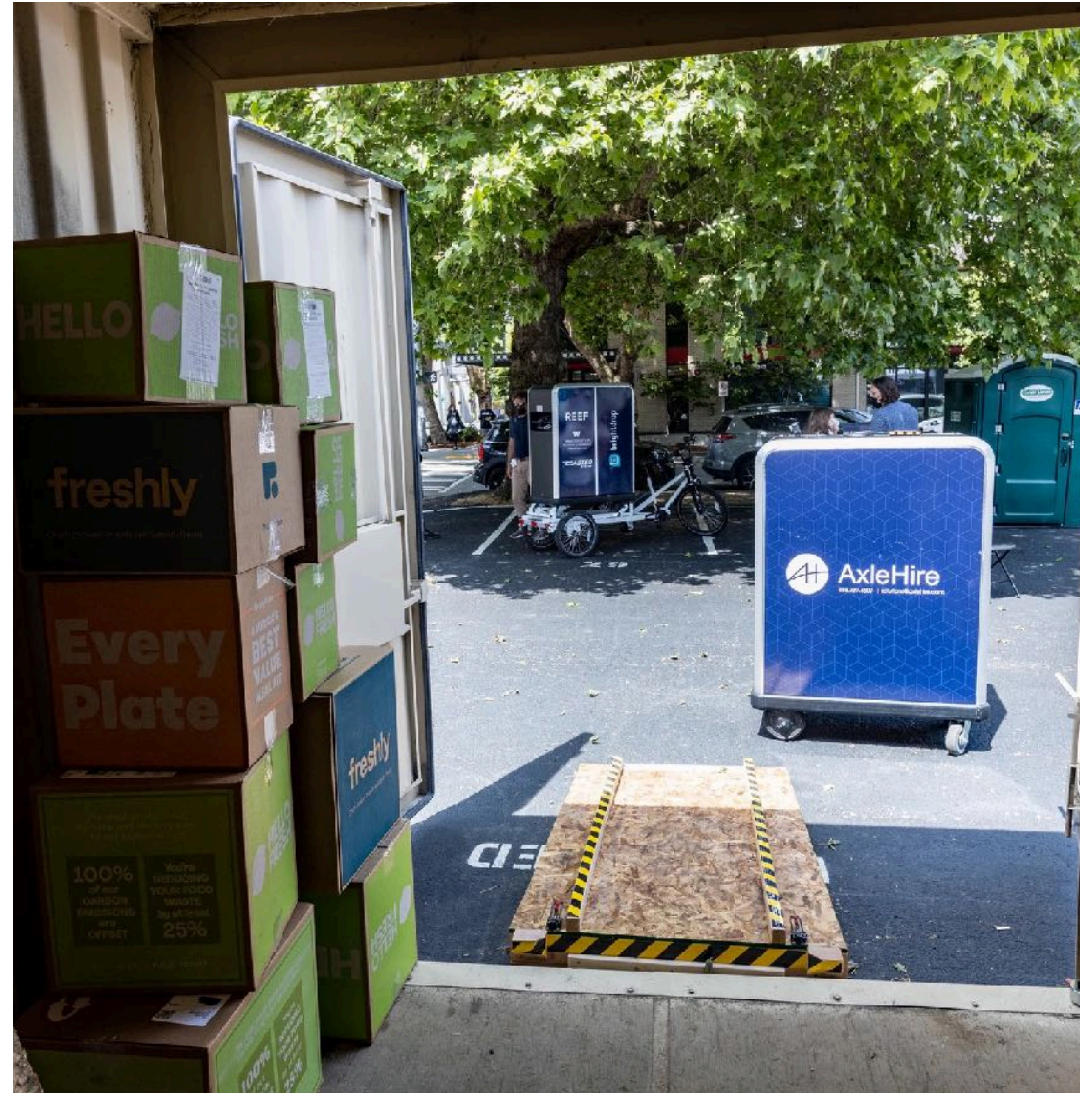
Policy Implications

- Innovative solutions may play an increasingly large role



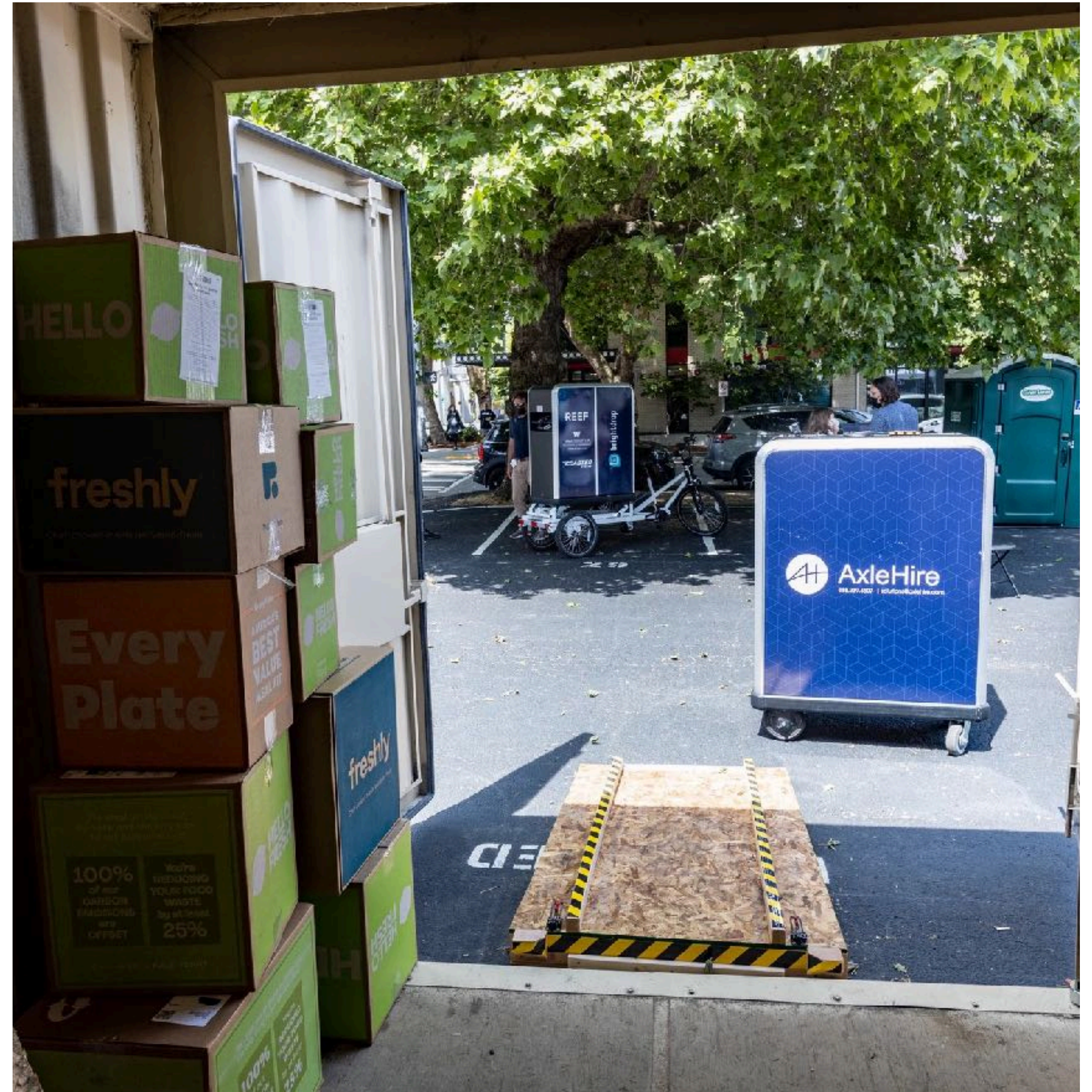
Policy Implications

- Innovative solutions may play an increasingly large role
 - App-based curb reservation systems



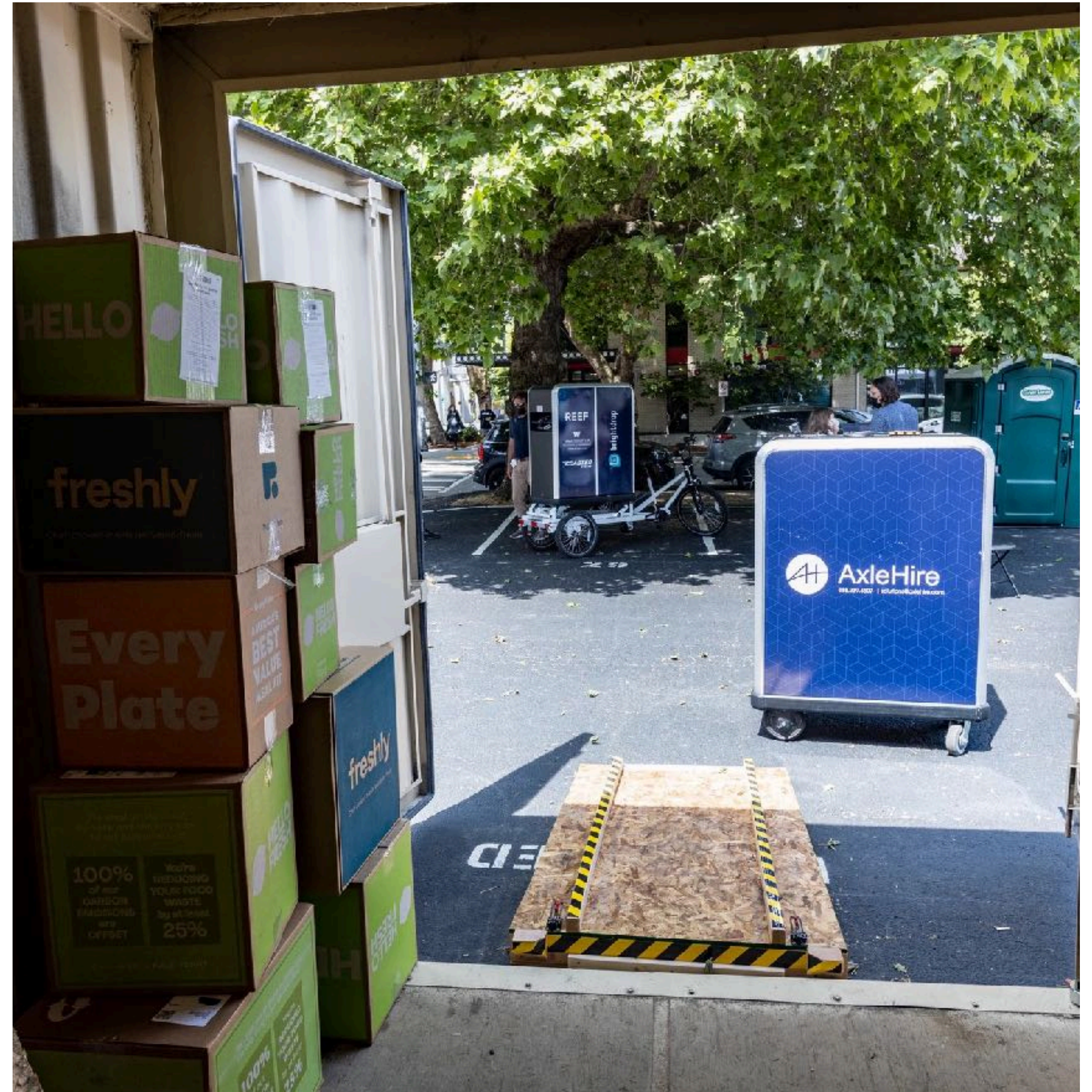
Policy Implications

- Innovative solutions may play an increasingly large role
 - App-based curb reservation systems
 - Microhubs



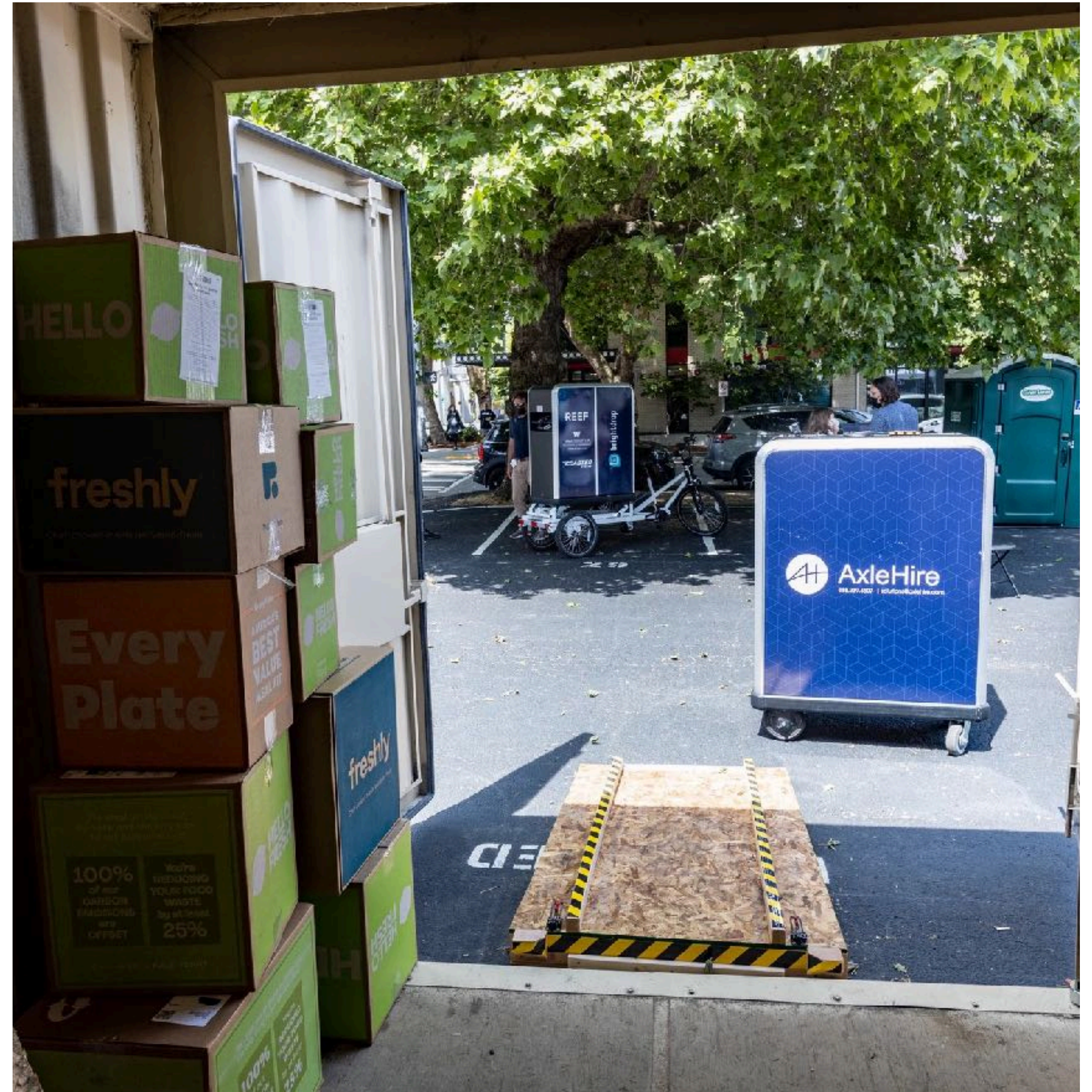
Policy Implications

- Innovative solutions may play an increasingly large role
 - App-based curb reservation systems
 - Microhubs
 - Cargo cycles



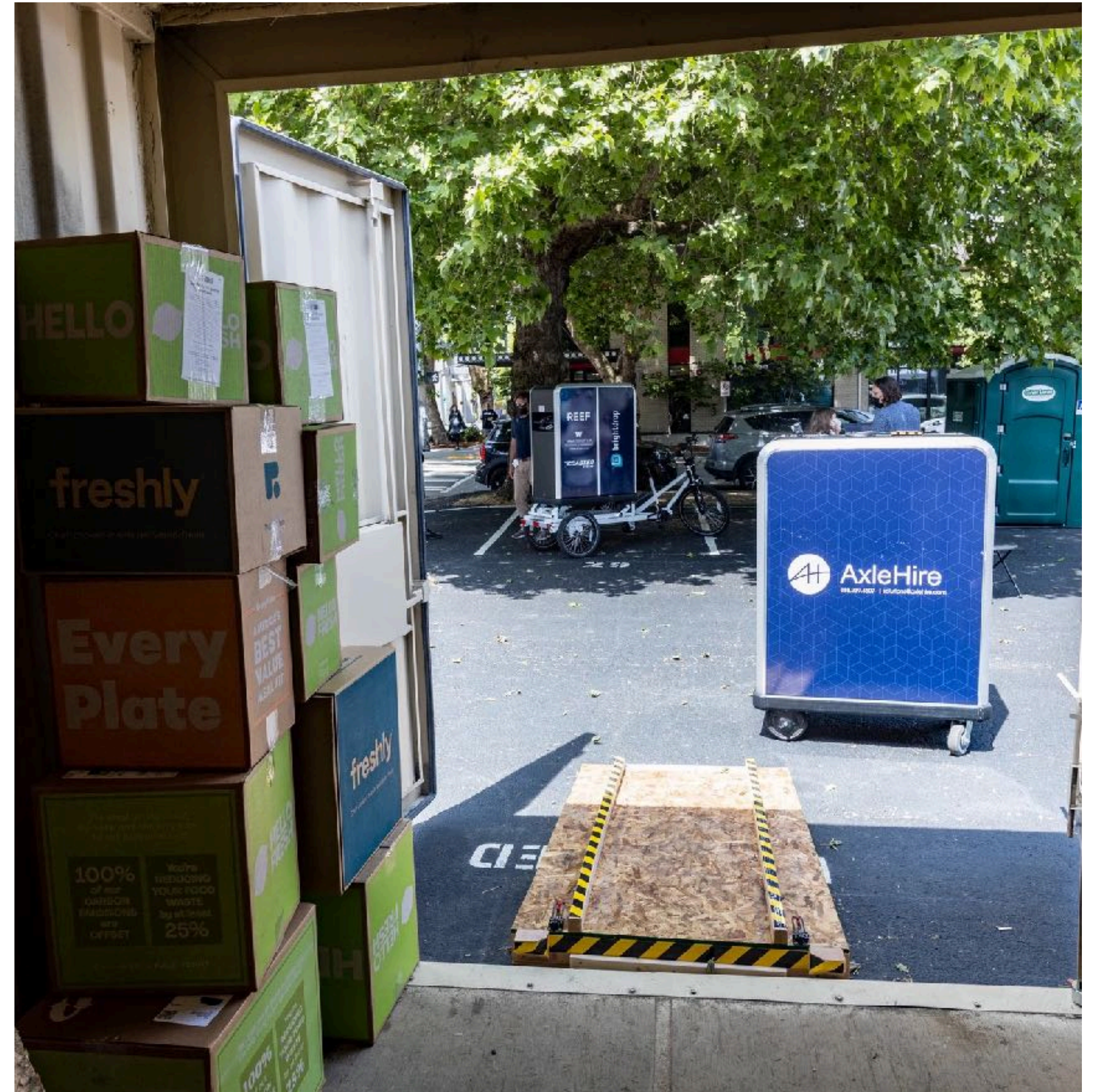
Policy Implications

- Innovative solutions may play an increasingly large role
 - App-based curb reservation systems
 - Microhubs
 - Cargo cycles
 - Autonomous vehicles



Policy Implications

- Innovative solutions may play an increasingly large role
 - App-based curb reservation systems
 - Microhubs
 - Cargo cycles
 - Autonomous vehicles
 - Droids, drones, trucks



Co-authors

Noreen McDonald

Department of City and Regional Planning
University of North Carolina at Chapel Hill

Charles Edwards

Department of City and Regional Planning
University of North Carolina at Chapel Hill

Ruth Steiner

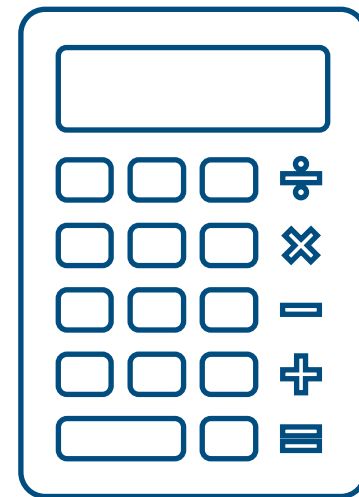
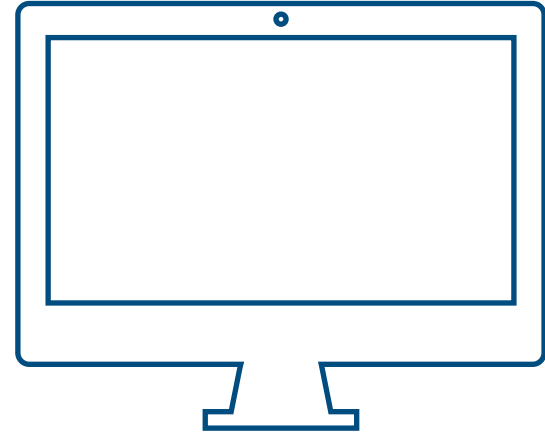
Department of Urban and Regional Planning
University of Florida

Questions?

Evan Iacobucci | evaniaco@unc.edu

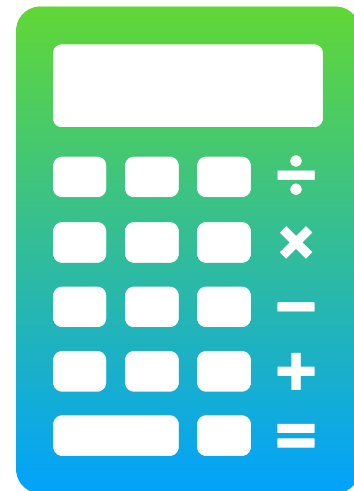
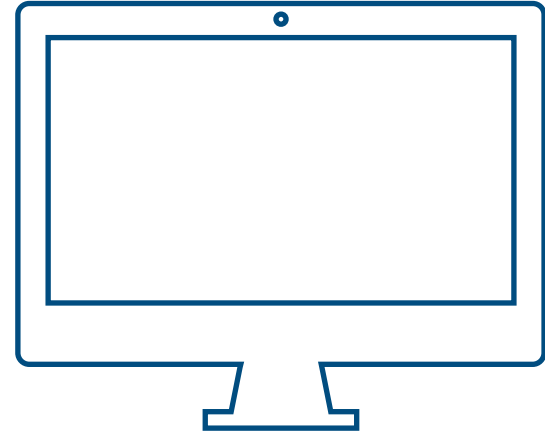
Bonus Slides

Data and Methods



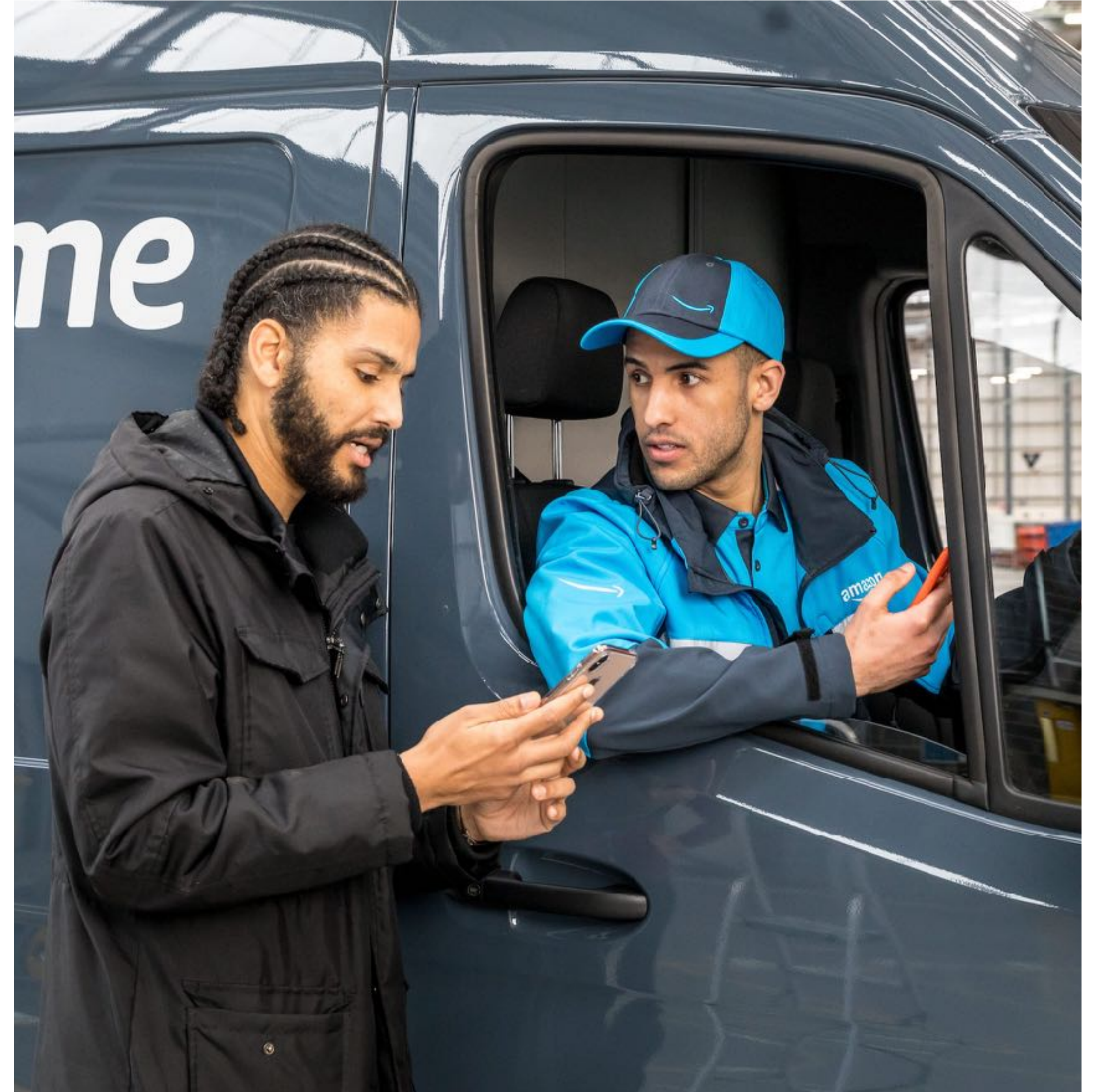
- Developed search terms
- Identified threads about downtown delivery, parking
- Scraped using RedditExtractoR
- Imported for analysis in NVivo

Data and Methods



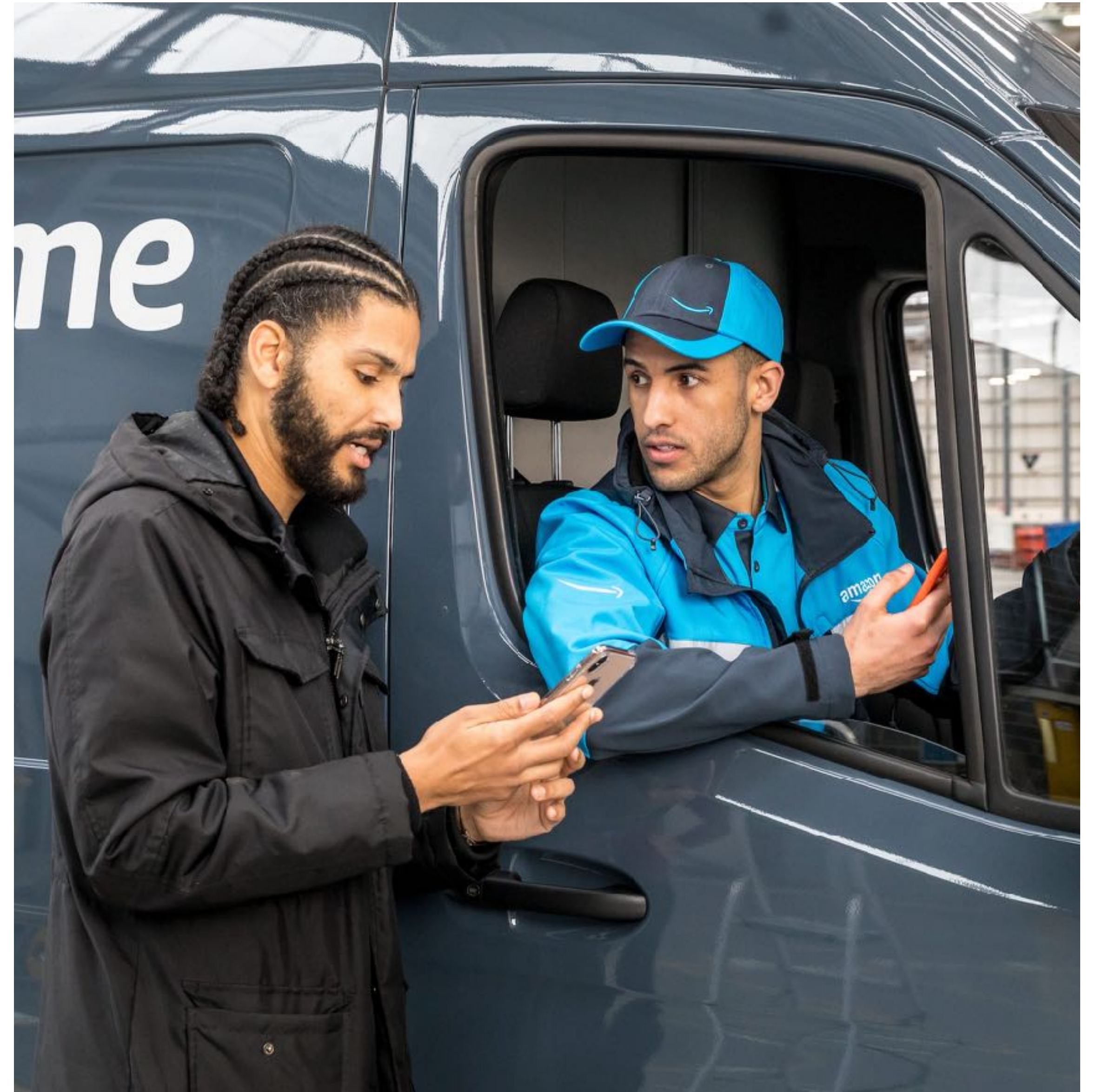
- “Flexible” coding (Deterding and Waters, 2018)
- Efficiently analyze unstructured data
- Hierarchical coding system
- Investigate meaning of and relationships between categories

Caveats and Limitations



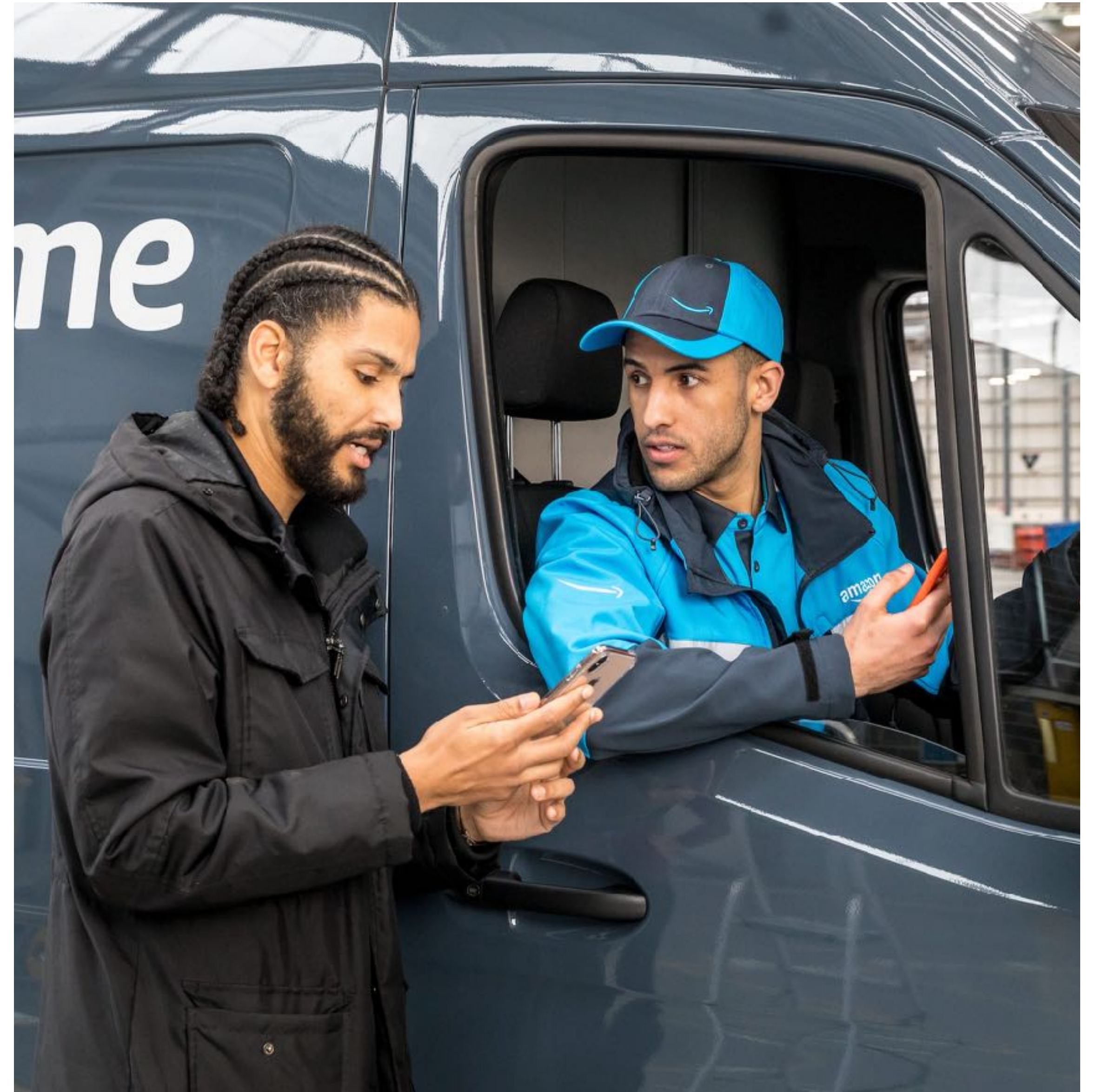
Caveats and Limitations

- Sample not representative of any specific population



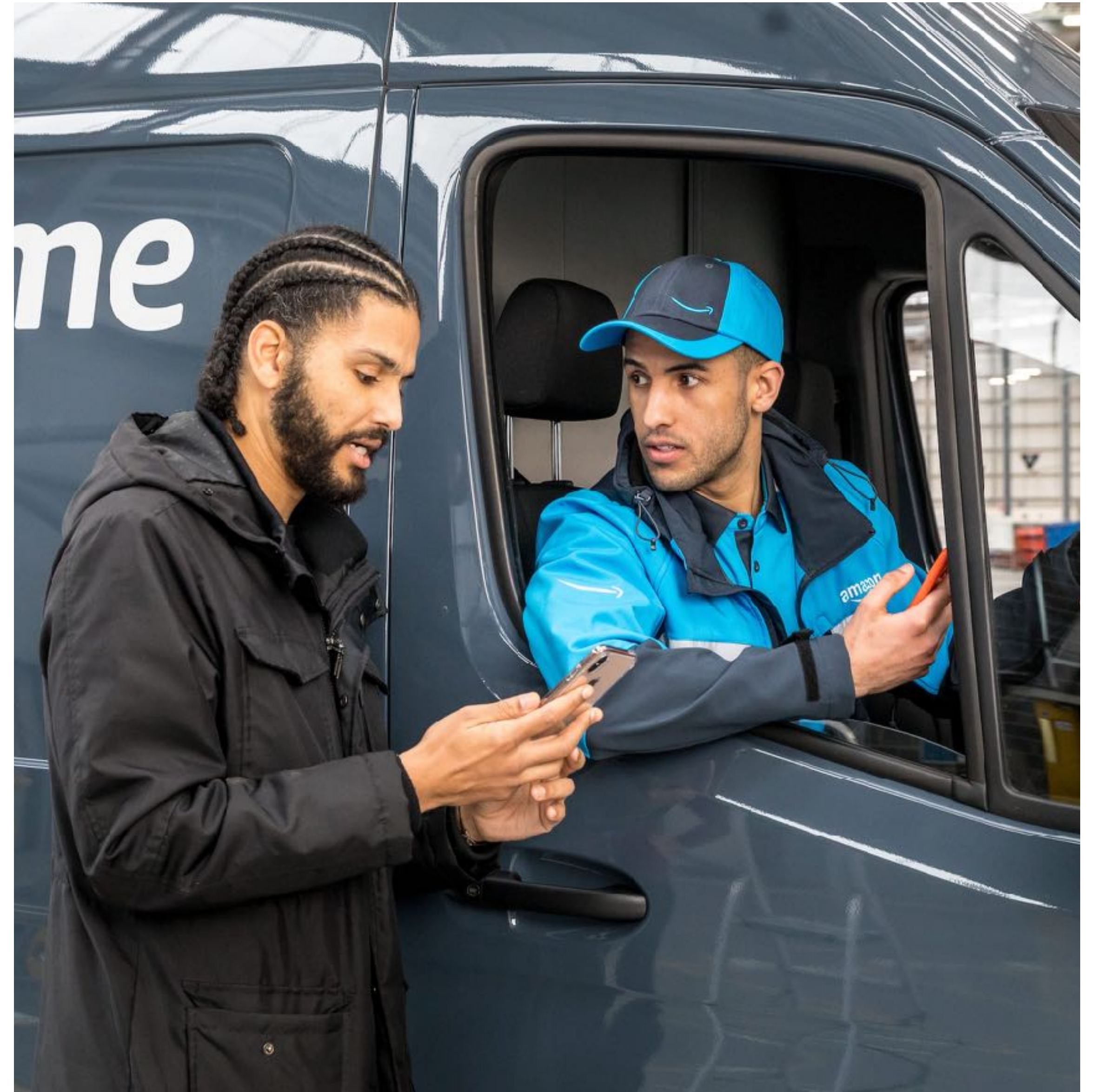
Caveats and Limitations

- Sample not representative of any specific population
- No demographic, personal information



Caveats and Limitations

- Sample not representative of any specific population
- No demographic, personal information
- Little geographical information



Caveats and Limitations

- Sample not representative of any specific population
- No demographic, personal information
- Little geographical information
- Comments posted mostly from one carrier's drivers

