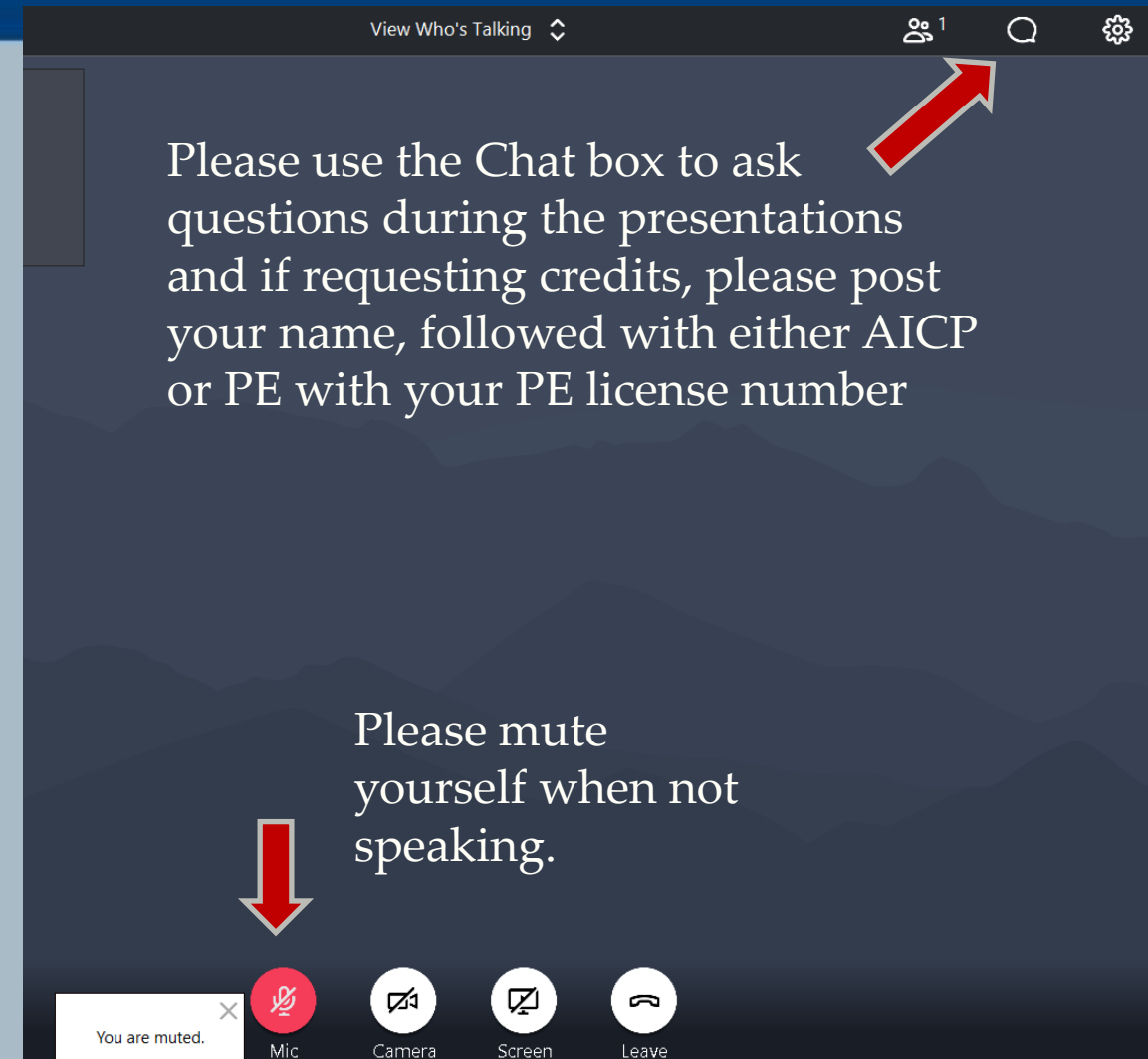






# August 16 Freight Initiatives Committee Agenda






- Roll Call of Members
- Approval of Minutes
- Update on NJTPA Freight Division Activities
- Presentations: Effective Urban Goods Movement Management Strategies
- Two-minute Reports on Freight Activities from Committee Members
- Next Meeting: October 18, 2021
- Adjournment



View Who's Talking   1  

Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

Please mute yourself when not speaking.

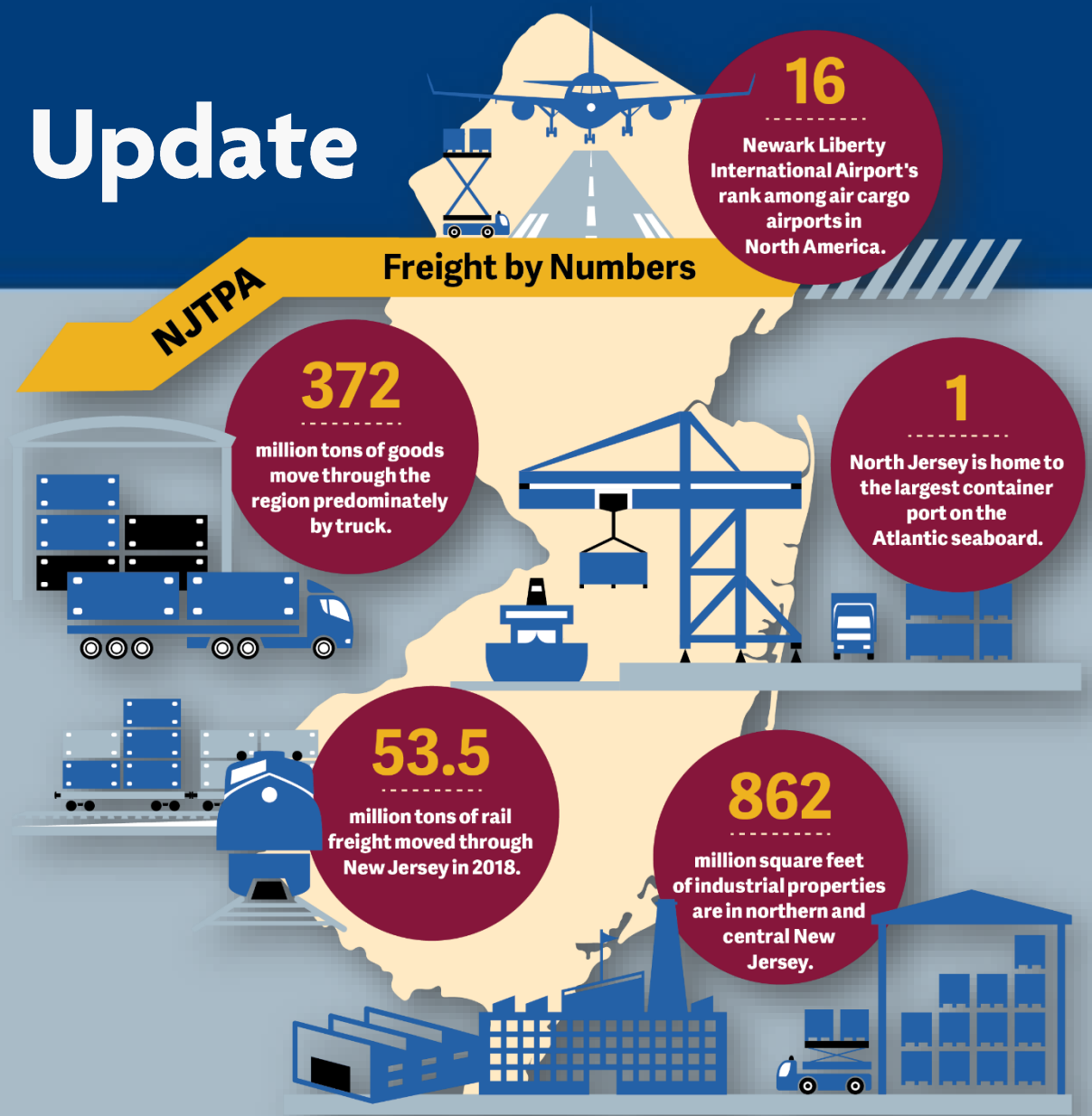
You are muted.   Mic  Camera  Screen  Leave

A screenshot of a Zoom meeting interface. The top bar shows 'View Who's Talking' with a dropdown arrow, a participants icon with '1', a chat icon, and a settings icon. A red arrow points from the chat icon to the text 'Please use the Chat box...'. The main area contains two paragraphs of text. A second red arrow points from the text 'Please mute yourself...' to the 'Mic' button in the bottom toolbar. The toolbar also includes 'Camera', 'Screen', and 'Leave' buttons. A 'You are muted.' notification is visible in the bottom left corner of the toolbar area.

# NJTPA Freight Division Update

## 2Q21 Industrial Market Update:

- Seven buildings totaling 2.2 million SF were completed.
- 14 buildings in over 5.8 million SF started.
- Leasing dominated by 3PLs, followed by ecommerce and consumer goods companies.
- 150 new bldgs since end of 2016.



# MAP Forum Multi-State Freight Working Group Initiatives

- September 14 Virtual Workshop on Industrial Real Estate Trends and Considerations
- Mapping of Potential Emergency Truck Parking Locations with TRANSCOM advances



Sources: [jerseydigs.com](http://jerseydigs.com), [https://www.pennlive.com/news/2016/02/pa\\_turnpike\\_says\\_series\\_of\\_acc.html](https://www.pennlive.com/news/2016/02/pa_turnpike_says_series_of_acc.html)

# Updated Freight Activity Locator



## Freight Activity Locator

Click the button below to stay up to date on the new events, data or information.

Follow

### Freight in the NJTPA Region

The NJTPA region is a leading North American distribution and goods movement platform serving the local, national, and global consumer markets. The region includes the largest port on the Atlantic Coast, one of the leading air cargo airports in North America, over 850 million square feet of industrial property, and extensive road and rail freight networks.

Rail

53.5

million tons of freight moved by rail



Port

7.6

Ten thousand TEU (Twenty Foot Equivalent Units) handled by the Port of New York and New Jersey in 2019.



Warehouses

862

million square feet of industrial property in northern and central New Jersey.



### Explore the Freight Activity Locator

Click on a card below or select one of the title headings at the top of this page to navigate to a specific topic of interest.

For more specific instructions on how to navigate the site and applications [click here](#) for the tutorial document.



#### Regional Freight Systems

Click on the button below to learn more about freight opportunities in the region.

Big and Bright Station



#### Freight Opportunities

Click on the button below to learn more about freight opportunities in the region.

Freight Opportunities



#### Truck Parking

Click on the button below to learn more about truck parking in the region.

Truck Parking



#### Freight Profiles

Click on the button below to learn more about the detailed freight forecasts, costs by county and commodities.

Freight Profiles

### What's New in Freight?

Upcoming Events

August - 2021							Aug 16
Sun	Mon	Tue	Wed	Thu	Fri	Sat	16
1	2	3	4	5	6	7	16
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30	31	1	2	3	4	

Freight Initiatives Committee Meeting  
1:00 PM - 3:00 PM EDT

Check out the updated tool at:  
<https://freightactivitylocator.njtpa.org/>



#### CONTACT US

One Nassau Center | 1711 Plaza, Newark, NJ 07102  
P: 973-485-8400  
F: 973-485-9100  
Email: [info@njtpa.org](mailto:info@njtpa.org)  
Copyright © 2021 NJTPA, Inc.

# NJTPA Freight Division Update

- FY 2021 Freight Concept Development Program Studies
  - Completed Local Officials Briefings for both studies.
  - Scheduled Public Meetings for both studies for mid-September.

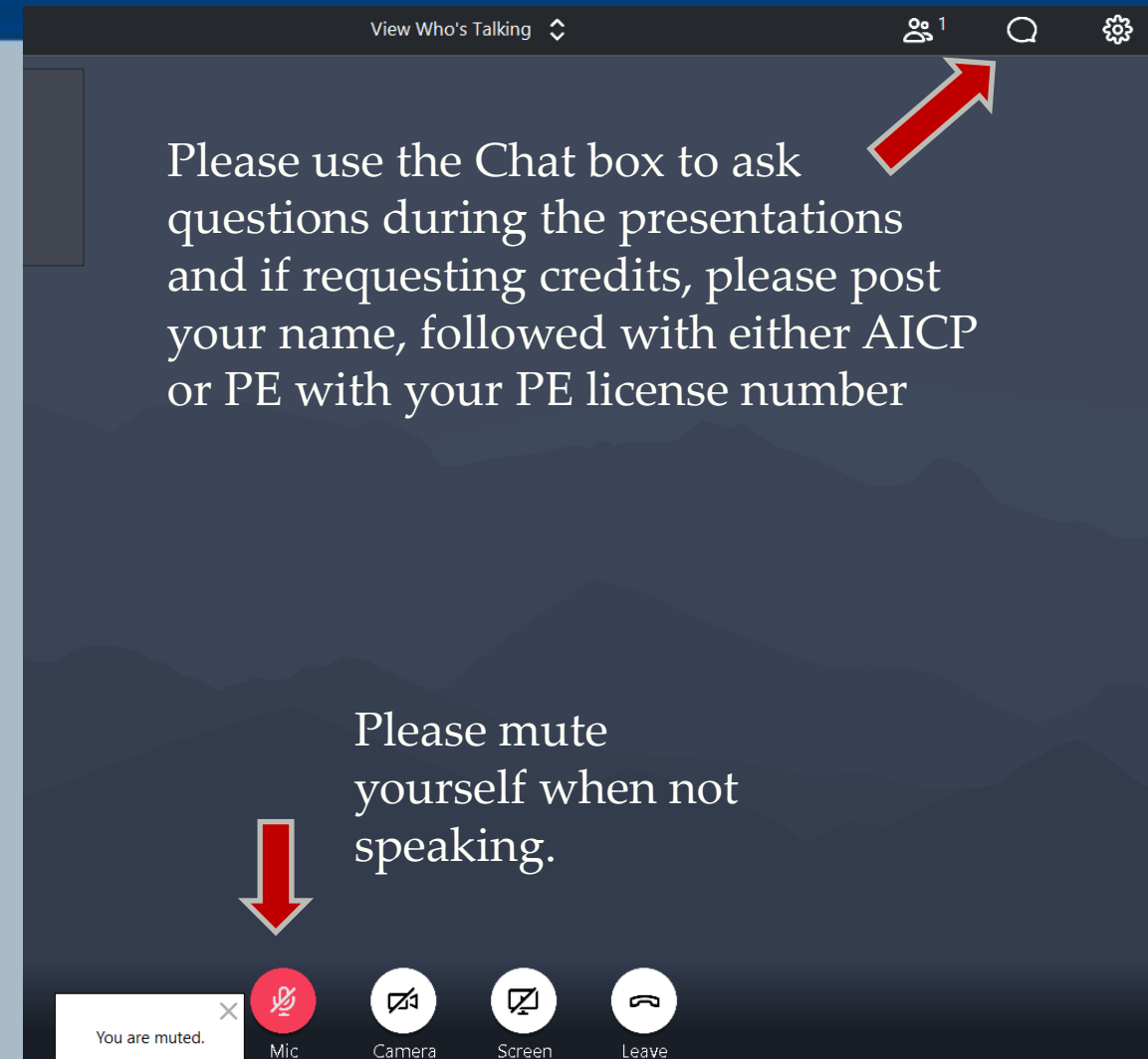
*For more information:*





*<https://njtpa.org/2021FCDP.aspx>*



# August Freight Initiatives Committee Presentations and Discussion






- **New York City**, Diniece Mendes, Director, Freight Mobility, New York City Department of Transportation
- **Washington, DC**, Laura MacNeil, Freight & Urban Delivery Planner, District Department of Transportation
- **Seattle**, Andisheh Ranjbari, PhD, Director, Urban Freight Lab, University of Washington



View Who's Talking   1  

Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

Please mute yourself when not speaking.

You are muted.   Mic  Camera  Screen  Leave

A red arrow points from the chat icon in the top right corner of the Zoom interface to the text above. Another red arrow points from the microphone icon in the bottom control bar to the text below.



# NJTPA Freight Initiatives Committee 8/16/21

## Effective Urban Goods Movement Strategies

Diece Mendes, EIT A.M ASCE  
New York City Department of Transportation



# NYC DOT Overview

## Mission

Provide for the **safe, efficient, and environmentally responsible movement of people and goods** in the City of New York and to **maintain and enhance** the transportation infrastructure crucial to the **economic vitality and quality of life** of our primary customers, City residents.

## (Who We Are) and (What We Maintain & Operate)

- **+5,500** employees
- **\$900** million annual operating budget
- 5-year **\$10.1 billion** capital program,
- **6,000 miles of streets** and highways,
- **12,000 miles of sidewalk,**
- **794 bridges and tunnels,** including the iconic East River bridges.
- **1 million+** street signs, **12,700** signalized intersections, **315,000+** street lights, and **over 200 million linear feet of markings.**

Serving **8.4 million** residents, **4.5 million jobs**, and **62 million tourists** per year



# Freight Movement & Livability

Several driving forces  
shaping demand in  
NYC



**A Growing  
City**



**Strong  
Economy**



**Livable  
Streets**



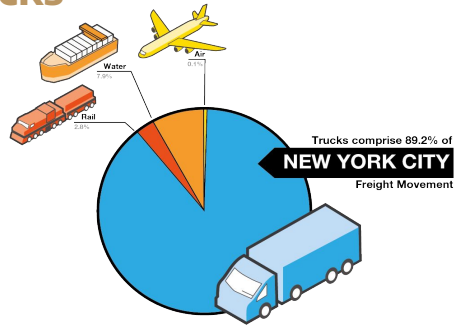
**Evolving consumer &  
retail trends**



**Negative  
Externalities**

# Trucks play a critical role in today's supply chain

Nearly 90% of goods in NYC are carried by trucks



- 120,000 trucks cross NYC boundaries on a daily basis
- During COVID-19, roughly 80% deliveries were destined for residential customers
- Projected 68% increased in freight tons by 2045, could bring additional 44,000 to 75,000 daily trucks to the network if no action is taken.



Cargo Ship



Cargo Plane



Truck

# Changing Landscape

## Transforming the last leg of the supply chain



- Reduce our over reliance on trucks and better manage those that remain
- Diversify last-mile freight modes
- Promote freight efficiency and sustainability
- Support economic development

# Delivering New York

## A Smart Truck Management Plan for New York City

- Release May 13, 2021 as part of Mayor's Streets Week announcements
- Blueprint for enhanced freight management that is safe, sustainable, equitable, and efficient.

**NYC**

**DELIVERING NEW YORK:  
A SMART TRUCK MANAGEMENT PLAN**

**SAFETY**

- Safety improvements along 70 priority truck corridors
- New vision aids technology

**EFFICIENCY**

- EXPAND Off-Hour/Overnight Deliveries
- EXPAND Neighborhood Loading Zones

**SUSTAINABILITY**

- Make Cargo Bike Pilot Program permanent + Expand
- Pilot Green Loading Zones

Learn more: [nyc.gov/smarttrucks](https://nyc.gov/smarttrucks)

**STREETS WEEK!!!!**

# Delivering New York: Plan's Vision & Goals

Enhance the **economic vitality** and **quality of life** for all New Yorkers by providing for the **safe, equitable, efficient, and responsible movement** of goods.

**30+ Strategies**  
**100+ initiatives**

## Safety

Improve the safety of truck travel within NYC

## Sustainability

Foster the sustainable and environmentally responsible movement of goods

## Efficient Freight Movement

Improve the efficiency of freight movement to, from, and within NYC

## Partnerships & Knowledge

Expand partnerships within the public and private sectors to increase awareness and understanding of freight activity

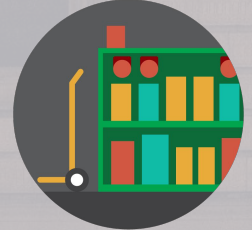


## Off Hour Deliveries (OHD)

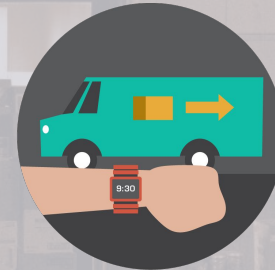
- **Freight Demand Management Strategy**
- **Shift deliveries to off-peak hours (7 p.m. – 6 a.m)**
- **Target Participants:**
  - **Corporate** – Food and non-food, retailers with vertically integrated supply chains
  - **Transporters** – Large shippers and carriers who distribute to many receivers
- **Our Role:** Technical support, tailored implementation guides, matchmaking and curb access (where feasible).



GOODS DELIVERED  
OUTSIDE STORE HOURS



GOODS PREPARED  
BEFORE STORE OPENS



MORE CERTAINTY ON  
TRUCK ARRIVAL TIMES



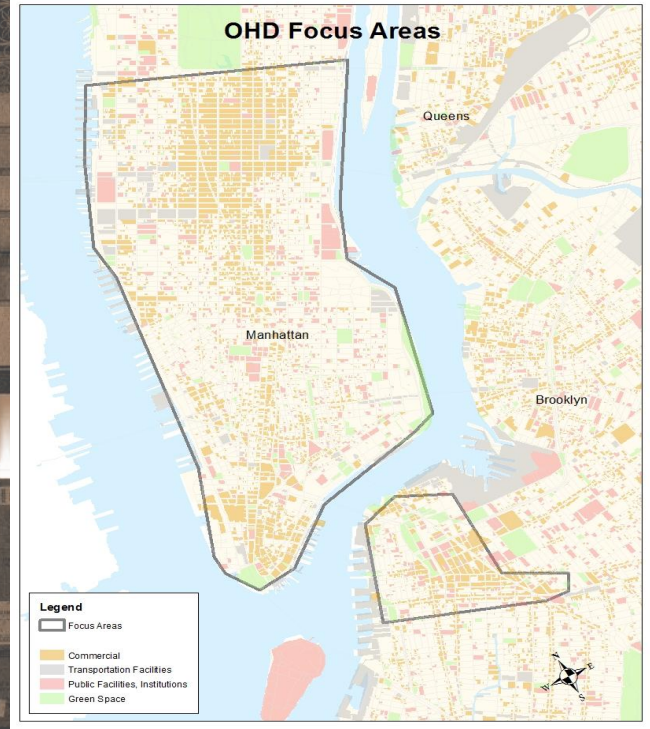
REDUCED DELIVERY  
COSTS

Driving behavior change through recognition



## Off Hour Deliveries (OHD)

- The OHD Program expansion primarily focuses on areas with high congestion during the day:
  - **Manhattan** – South of 59th Street
  - Downtown Brooklyn
  - Downtown Jamaica and Flushing
- **Lessons:** Context-sensitive, Receivers can lead change, need for proactive noise management, sustained engagement needed



# Introducing bicycle-friendly means of delivery

- **Launched** in December 2019
- **Program Participants:** Amazon, Fedex, DHL, UPS, NPD Logistics, Reef
- **Program Guidelines:** Vehicle Specifications, Safe operations, and Loading/Unloading, and Data Sharing Requirements
- **On-street infrastructure:** designed and implemented cargo bike corrals at high density pick up locations



+ 350  
cargo  
bikes so  
far!

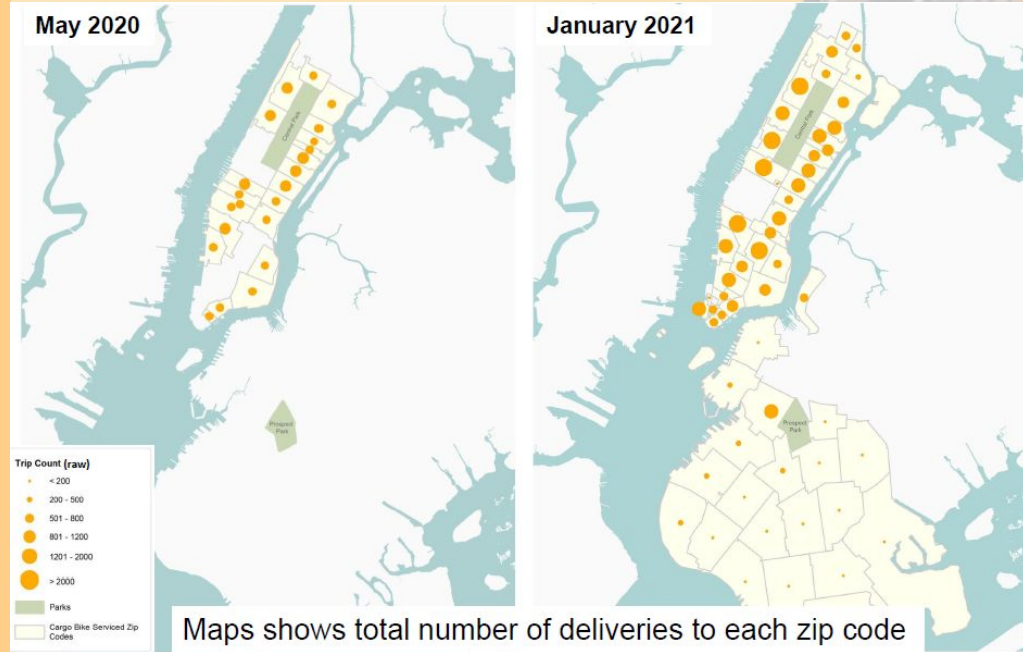
© NYC DOT

Sustainable, space-efficient last-mile freight delivery mode



# Introducing bicycle-friendly means of delivery

- **Doubled number of participants and tripled operating cargo bikes**
- 80% of cargo bike deliveries were destined for residential addresses
- **Minimal dwell time:** Cargo bikes typically spend 5 mins or less unloading at each address.
- **Competitive w/ larger vehicles:** Each cargo bike covers an average of 20 service miles per day, replacing vans or small box trucks on a 2:1 or even 1:1 basis



© NYC DOT

Sustainable, space-efficient last-mile freight delivery mode

# Tackling surge of residential deliveries



**Neighborhood Loading Zone (NLZ) program** aims to reduce double parking on narrow residential streets by providing space at the curb for activities such as:

- Package deliveries by commercial vehicles
- Taxi and car service pick-up and drop-off
- Active loading and unloading of personal vehicles

**Installed 62 loading zones along 10 corridors city-wide**

- Most NLZs have high utilization; corridors with the highest NLZ use averaged 600 vehicles per space per month for about 26 minutes a given time.
- Up to 73% reduction in double parking at observed sites



Jackson Heights, 74<sup>th</sup> Street

# Cleaner trucks for a greener NYC

## NYC Clean Truck Program

- Building on the success of Hunts Point Clean Truck Program.
- **Replace older**, heavy polluting diesel **trucks with newer** and more **environmentally friendly** trucks.
- **Launched industrial areas citywide expansion** in June 2020.



Volvo Trucks Delivers the First of Five VNR Electrics to New York Customer Manhattan Beer Distributors. Source: Volvo

# Growing Partnerships & Building Awareness



## Partnerships & Knowledge

DOT will foster multi-party dialogue, behavior change, and identify creative solutions by working with the freight industry, city agencies, and the public.

- Continue engaging the trucking industry through DOT's Freight Advisory Committee.
- Develop a continuous freight data collection program.
- Increase public engagement, awareness and education of freight transportation.
- Establish a Smart Urban Freight Lab to study, test, and evaluate innovative last-mile freight strategies.
- Work with partners to explore additional opportunities for long-term truck parking facilities.

**Smart Urban Freight Lab:** Test and evaluate innovative last-mile freight strategies, including through the collection of continuous freight data with industry and university partners



**The UFL is a structured work group comprised industry members and the City of Seattle Department of Transportation. Source: Urban Freight Lab**

# Thank you!

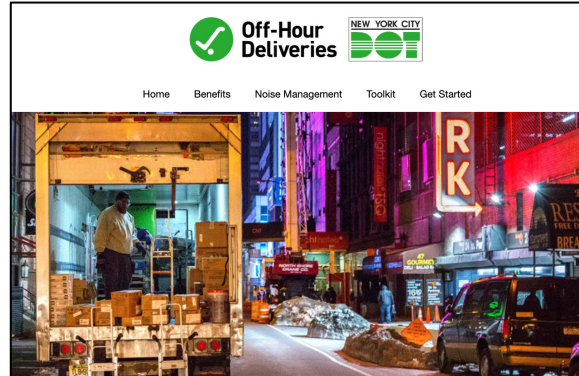
**Diniece Mendes, EIT A.M ASCE**

Director of Freight Mobility | NYCDOT

**Email:** [dmendes@dot.nyc.gov](mailto:dmendes@dot.nyc.gov)

**Website:** [www.nyc.gov/trucks](http://www.nyc.gov/trucks)

**Delivering New York Plan:** [www.nyc.gov/smarttruck](http://www.nyc.gov/smarttruck)





**District Department of Transportation  
Planning & Sustainability Division & Curbside Management Division**

# **Freight & Curbside Delivery Initiatives**

Laura MacNeil, Freight & Urban Delivery Planner

# DDOT Background

The District Department of Transportation (DDOT) plans, designs, builds, operates, and maintains the public right of way.

- Curbside management (parking, pick-up/drop-off, freight, etc.)
- Sidewalks and uses of the sidewalk (cafes, bike infrastructure, etc.)
- Street trees
- Infrastructure Construction & State of Good Repair
- Transit and Shared Mobility (Streetcar, DC Circulator, Capital Bikeshare, e-scooters)
- Development review



# DDOT Background

## Curbside Management

- Curbside loading zones
- Development review (Curbside Operations)
- Curbside Pilots
- Curbside Enforcement Coordination

## Planning & Sustainability

- Truck Routes & Restrictions
- Development review (Loading facility zoning compliance)
- Alternative Delivery Mode Pilots
- Size & Weight Enforcement Coordination





# AN EVOLVING CURB

1960s-2000s – Cars, Bikes, Parcel/Freight

2010 – Bikeshare, Food Trucks, Rideshare

2012 – Point-to-Point Carsharing

2016 – On-Demand Delivery

2017 – Dockless Bikeshare and Scooters

2019 – Mopeds



# Commercial Curbside Demand

## 1. Commercial deliveries

- US DOT-registered vehicles / weekdays

## 2. Service vehicles

- Vans, often with equipment that can't fit in garages, longer-term parking needs

## 3. Traditional Parcel deliveries

- Box trucks / weekdays

## 4. “Express” deliveries e.g. Amazon Prime

## 5. Ride Hail e.g. Lyft

- Passenger cars used for commercial purposes

## 6. App-based deliveries/ “ODDs”

- Passenger cars used for commercial purposes

## 7. Grocery deliveries

- Refrigerated box trucks / all-hours



# Commercial Loading Zones

- Requested by businesses when off-street loading options not available
- **600+ zones** citywide
- Converted to metered in 2015
- Payment by:
  - Annual permit decal: \$323/yr
  - Daily permit decal: \$25/day
  - Mobile payment: \$2.30+/hr
- Permit up to **2 hours** of parking
  - An attempt to balance delivery needs & short-term service vehicle parking needs
- Exclusive use by **commercial vehicles:**  
Any four-wheeled vehicle that is
  - longer than twenty-two (22) feet;
  - or used for transporting commercial loads or property;
  - or described as a commercial vehicle on its certificate of title;
  - or has an irremovable commercial advertisement or insignia.



# Pick-up / Drop-off (PUDO) Zones

## Pick-up/Drop-off Zones

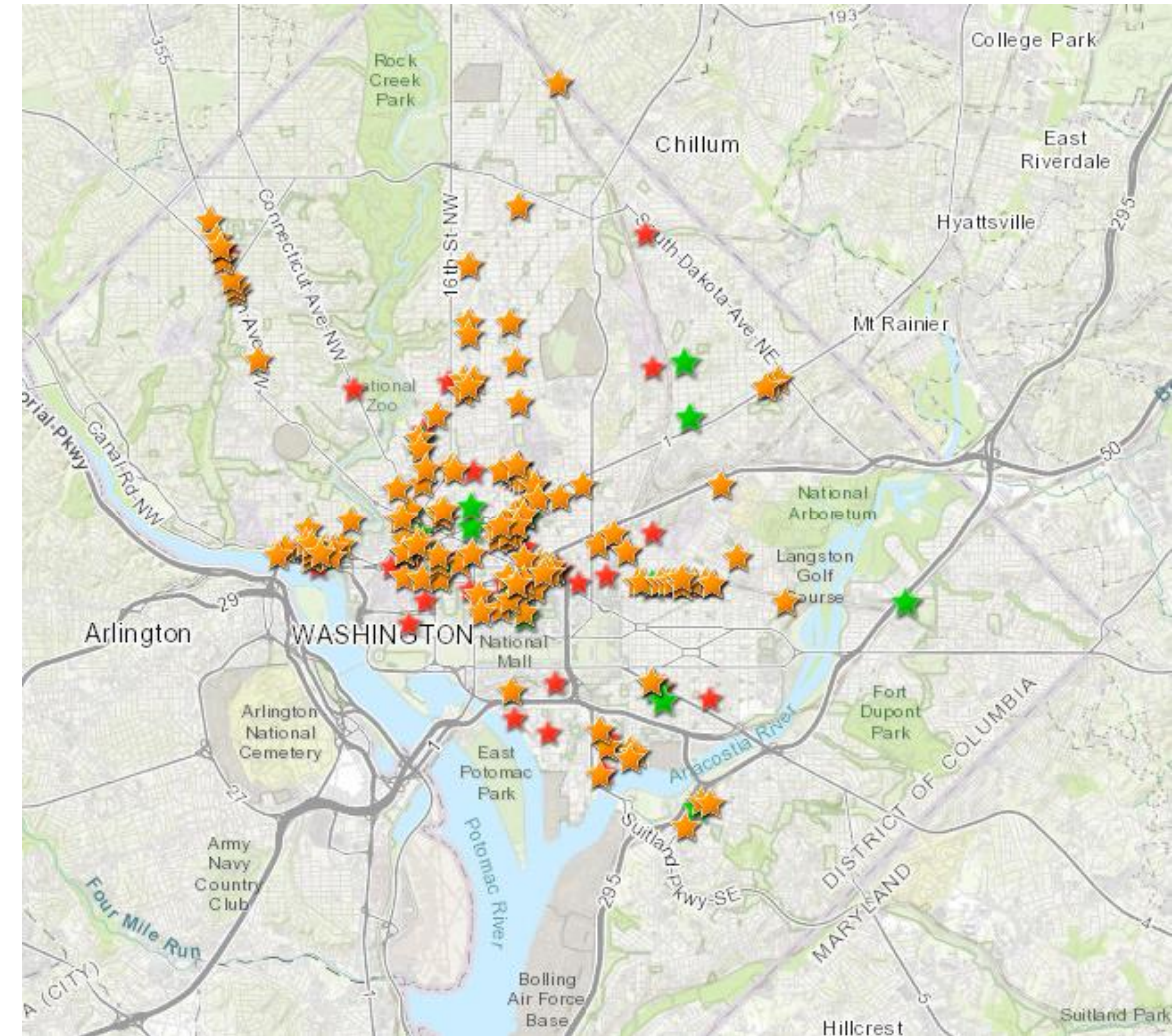
- Curbside access for passenger pick-up / drop-offs
- Taxis + Ridehails + Personal vehicles
- Active commercial loading
- App-based food deliveries



# Public Health Emergency Initiatives

## Temporary Restaurant Pick-up/Drop-off Zones

- Submit application through community organizations
- Permit fees waived
- Available for pick-up at restaurants & grocery stores



# Public Health Emergency Initiatives

- Temporary Sreatery Program



# Institutionalizing Freight Considerations

- Streatery Guidelines
- Curbside Management Guidelines

## 5. REVIEW AND APPROVAL PROCESS

### 5.1. Permitting Process

Applicants proposing a Streatery must file a public space permit online at <https://tops.ddot.dc.gov>. All existing permits with DDOT, DCRA, and ABRA for the restaurant must be up to date with no outstanding fees, otherwise a public space permit will not be issued.

	Step	Notes
1	<b>Find a Suitable Location</b> Use the Streatery guidelines to identify a permitted location within the District.	-
2	<b>Develop a Curbside Management and Delivery Plan</b> Work with the businesses and residents along the impacted segment of the street corridor to develop a curbside management plan and delivery plan. Apply for a Preliminary Design Review Meeting (PDRM) in TOPS to receive preliminary feedback from District agencies.	Streatery – Multiple Businesses ONLY
3	<b>Submit a Public Space Permit</b> Submit a Construction Permit for a "Streatery – Individual Business", "Streatery – Multiple Businesses", or "Streatery – Alley" in TOPS. The application should include all the required documents outlined in Section 5.2 of this document. DDOT will evaluate the proposal for compliance with Streatery requirements. If there are outstanding issues, DDOT will notify the Applicant that revisions are needed. If the proposal is compliant, DDOT will send the permit to the Public Space Committee for approval.	2-3 months
4	<b>Public Space Committee Review and Approval</b>	

# Institutionalizing Freight Considerations

- Bus Priority Program – pro-active siting
- Automated Traffic Enforcement





# Next Steps

- Delivery Demand Management
- Right-sizing & repricing loading zones
- Streamlining loading zone payment
- Reassessment of commercial vehicle definition & criteria
- Migrate data to integrated sign management platform
- Trial separation of service vehicle parking and commercial delivery zones



d.

---

District Department of Transportation



URBAN FREIGHT LAB

UNIVERSITY of WASHINGTON

College of Engineering

# Effective Urban Goods Movement Management Strategies in Seattle

**Andisheh Ranjbari**

Director, Urban Freight Lab

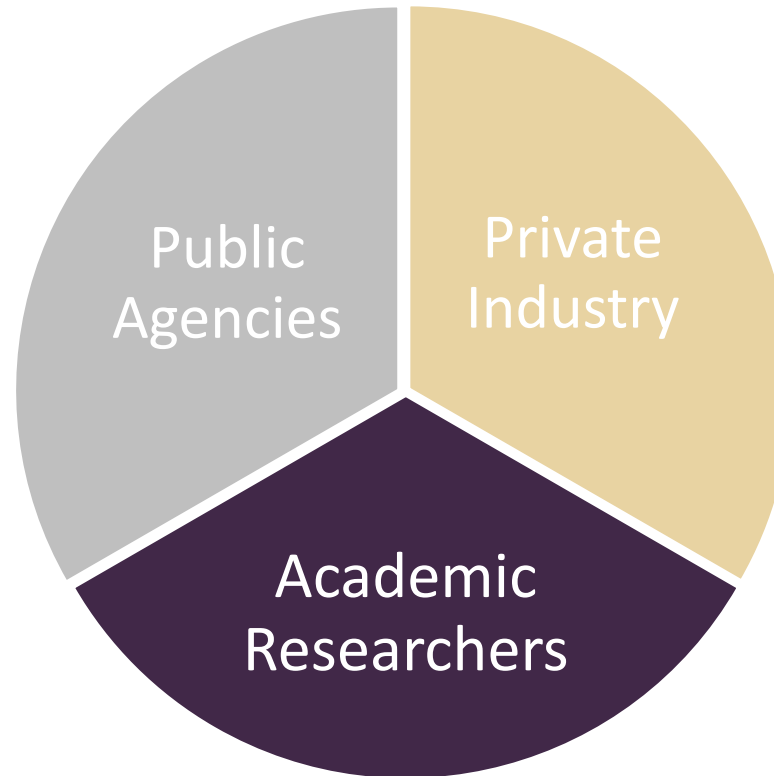
University of Washington

NJTPA Freight Initiatives Committee Meeting

August 2021

# Urban Freight Lab (UFL)

- Seattle DOT
- Bellevue DOT
- NYC DOT\*
- Fort Smith, AR MPO\*



- Retailers
- Shippers and Carriers
- Infrastructure and Property Owners
- Vehicle manufacturers
- Technology providers



More about the UFL: <https://depts.washington.edu/sctlctr/urban-freight-lab>

\*Winners of TAP 2021: <https://depts.washington.edu/sctlctr/news-events/announcements/winners-selected-TAP>

# Urban Freight Lab (UFL)



# 3 pilot projects ...

Common-carrier Parcel Lockers

Zero-emission Last-mile Delivery Hub

Parking Information & Prediction App for Commercial Drivers

# 3 pilot projects ...

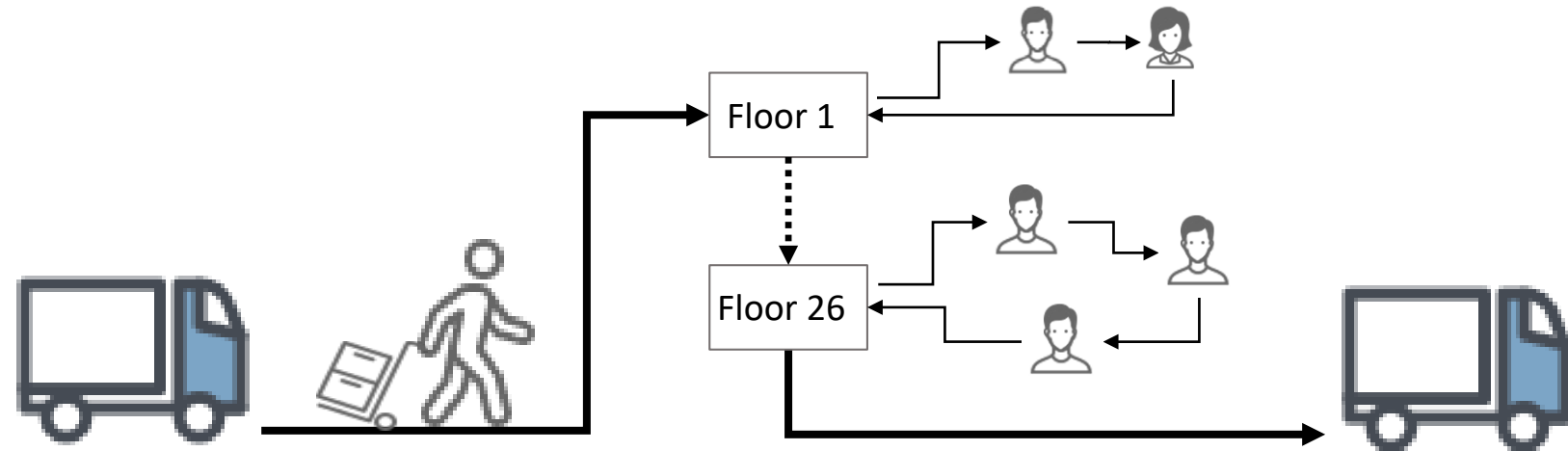
Common-carrier Parcel Lockers

Zero-emission Last-mile Delivery Hub

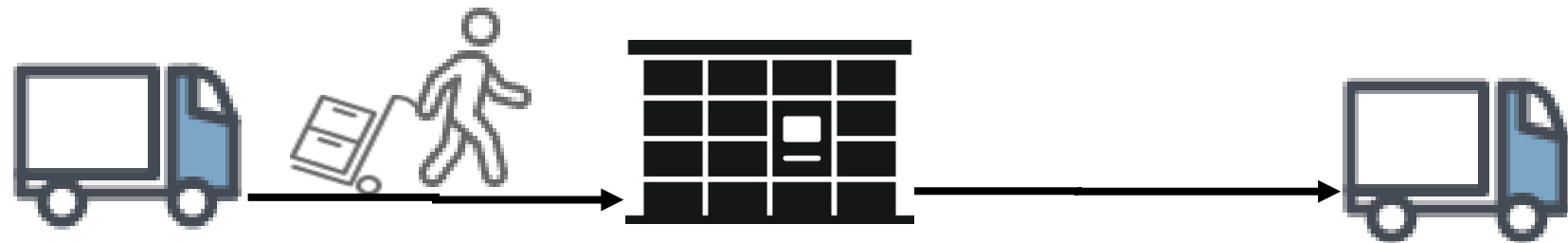
Parking Information & Prediction App for Commercial Drivers

By consolidating deliveries in one spot, lockers provide delivery density and reduce delivery time.

Before  
Lockers



After  
Lockers





# We pilot tested a common-carrier parcel locker in a residential building in downtown Seattle.



We collected data before and after locker installation from the study building, as well as a similar nearby building as a control building.



#### Data Collection

- Before: Summer 2020
- After: Winter 2021

- ✓ Similar floor area ratio
- ✓ Similar number of units and residents
- ✓ Similar nearby loading zone availability
- ✓ Same neighborhood and similar traffic patterns



# Findings

The locker resulted in ...



**%50**

in average **time spent in the building**



**%33**

in delivery vehicles' **dwell time** at the curb

# 3 pilot projects ...

Common-carrier Parcel Lockers

Zero-emission Last-mile Delivery Hub

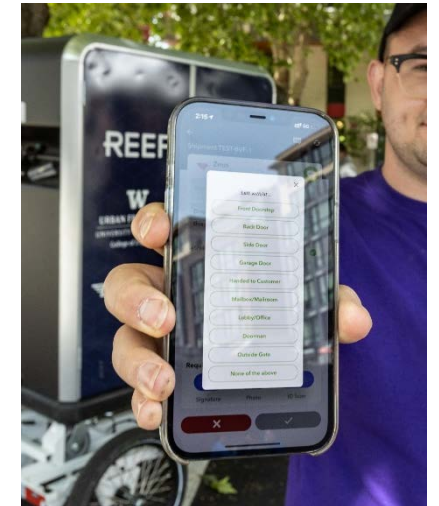
Parking Information & Prediction App for Commercial Drivers

# In Spring 2021, we pilot tested a neighborhood delivery hub in uptown Seattle.



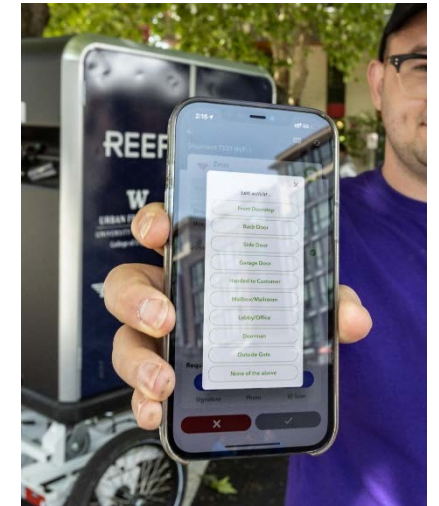
# The hub offers multiple last-mile delivery services:

- Public common-carrier parcel locker
- Ghost kitchen
- Electric-assist cargo bike + Propulsion-assisted electric pallet + Last-mile routing and logistics software



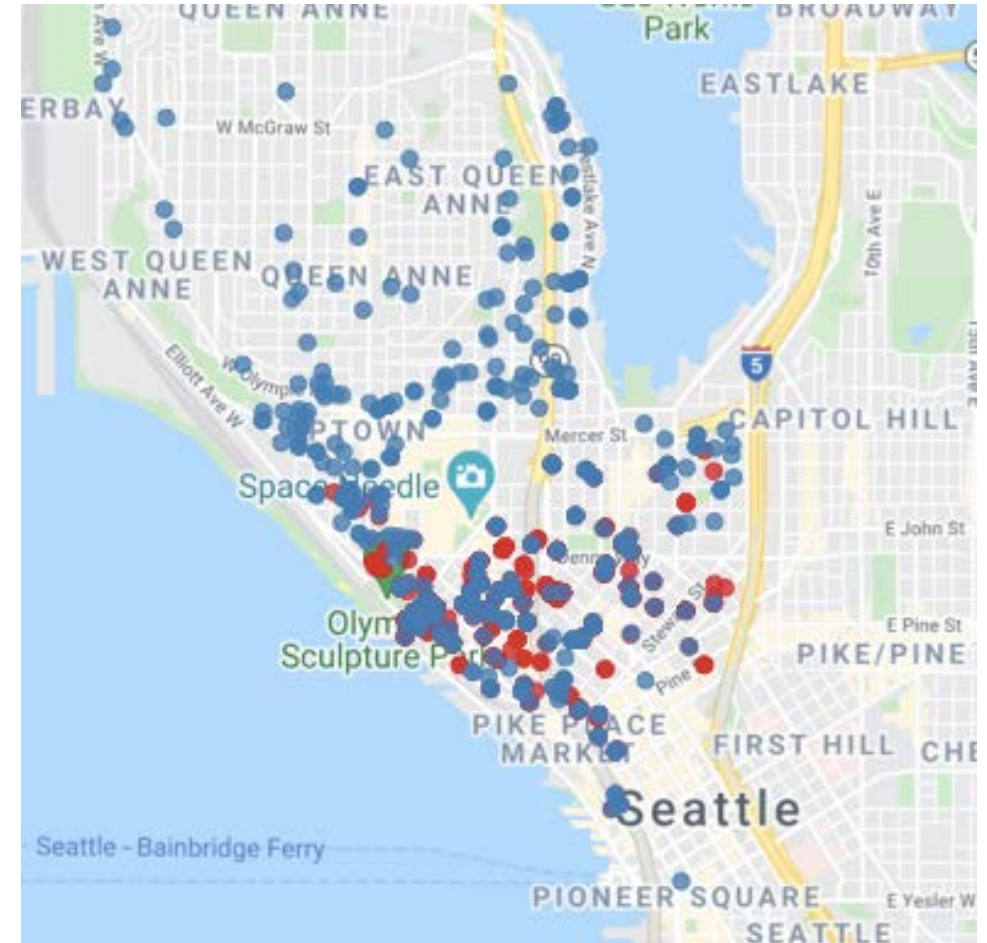
# The hub offers multiple last-mile delivery services:

- Public common-carrier parcel locker
- Ghost kitchen
- Electric-assist cargo bike + Propulsion-assisted electric pallet + Last-mile routing and logistics software



# We obtained trip data on ICE vehicle and e-bike delivery operations.

- E-bike data from the study neighborhood; ICE vehicle data from a larger area
- Metrics:
  - Vehicle miles travels (VMT) per package
  - CO2 emissions per package
- ✓ Accounted for trucks/vans carrying packages to the hub
- ✓ Accounted for CO2 emissions produced by e-bike charging electricity consumption



Delivery destinations

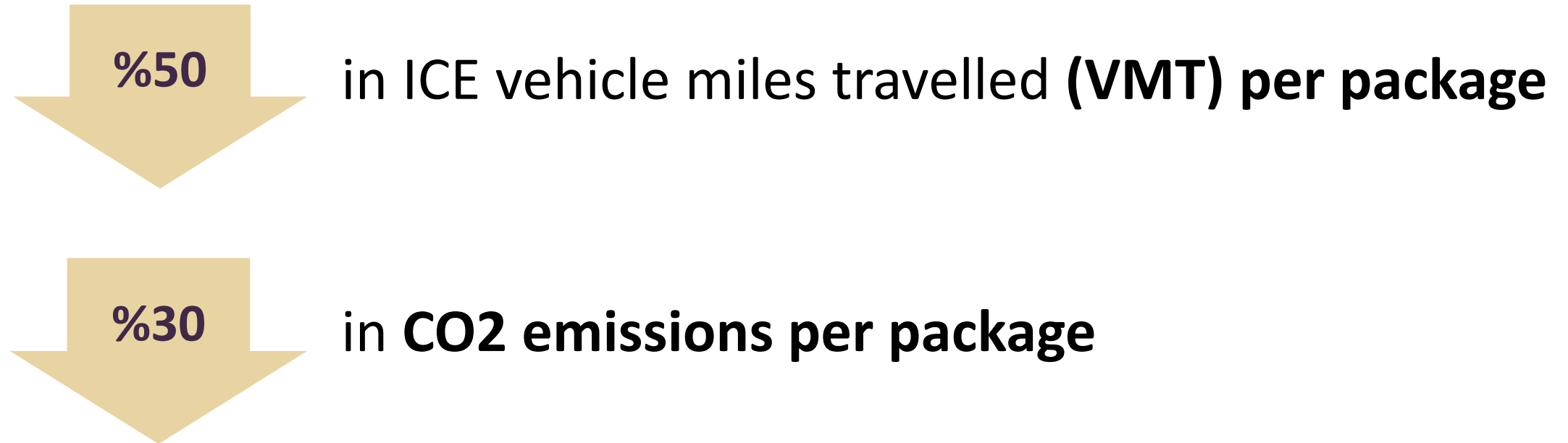
● E-bike

● ICE vehicles



# Findings

The e-bike solution resulted in ...



# Findings

- E-bikes replace vans/trucks almost mile for mile.
- E-bike delivery reduce **congestion, CO2 emissions, and vehicle size** in neighborhoods.

# 3 pilot projects ...

Common-carrier Parcel Lockers

Zero-emission Last-mile Delivery Hub

Parking Information & Prediction App for Commercial Drivers

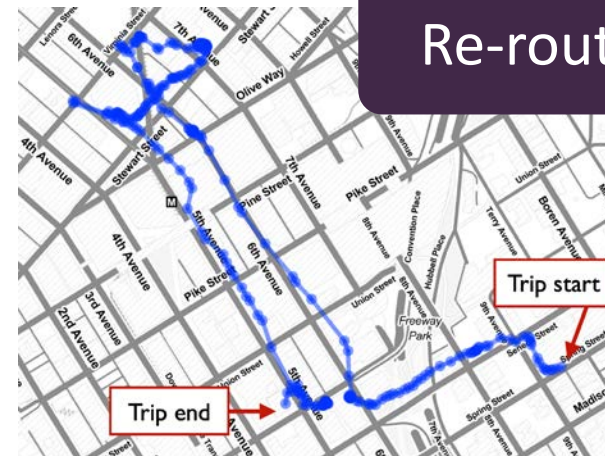
# We performed ride-alongs with delivery drivers to learn about urban freight parking behaviors.

We observed that when a parking space is not available, delivery drivers typically show one of these behaviors:

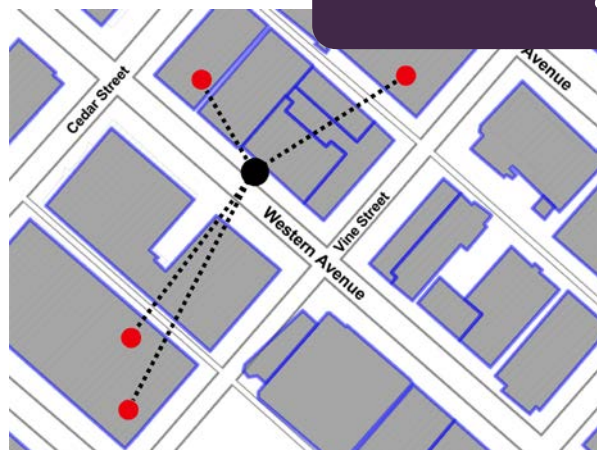
Cruising



Re-routing



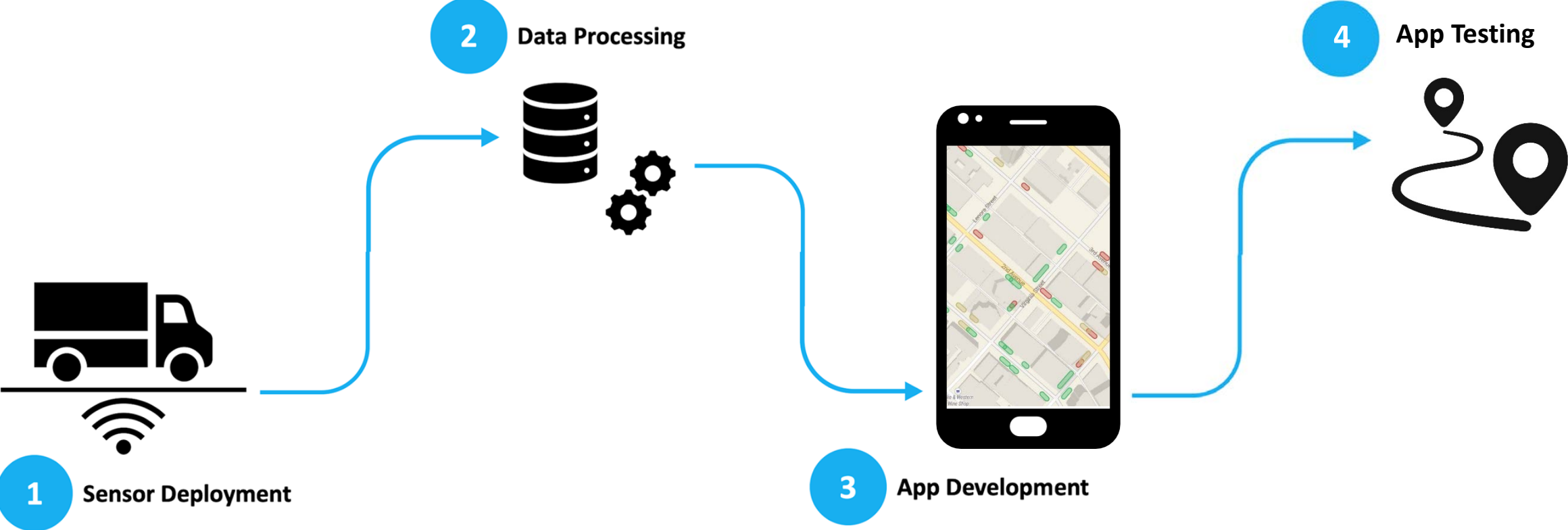
Walking



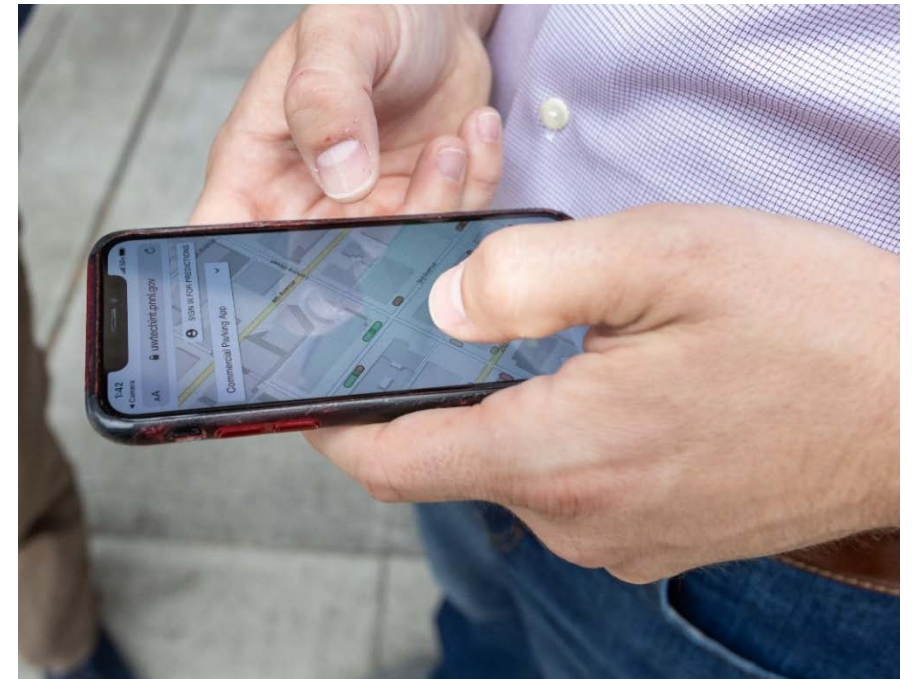
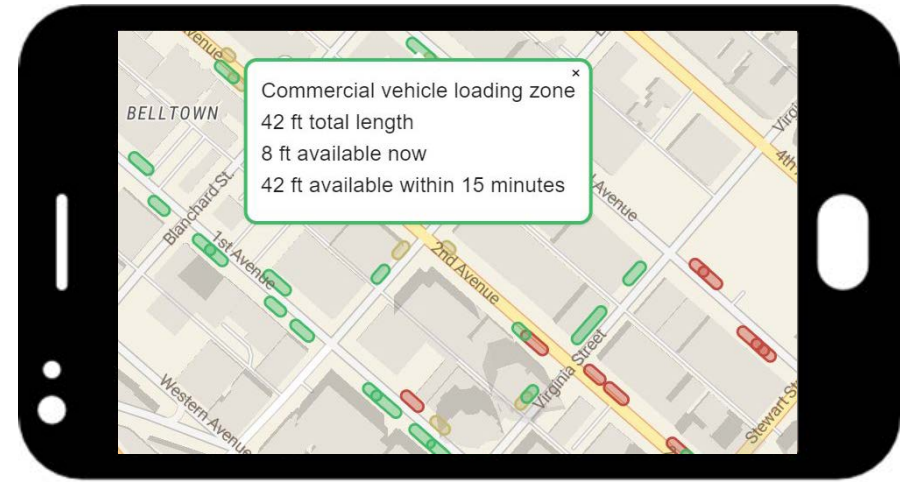
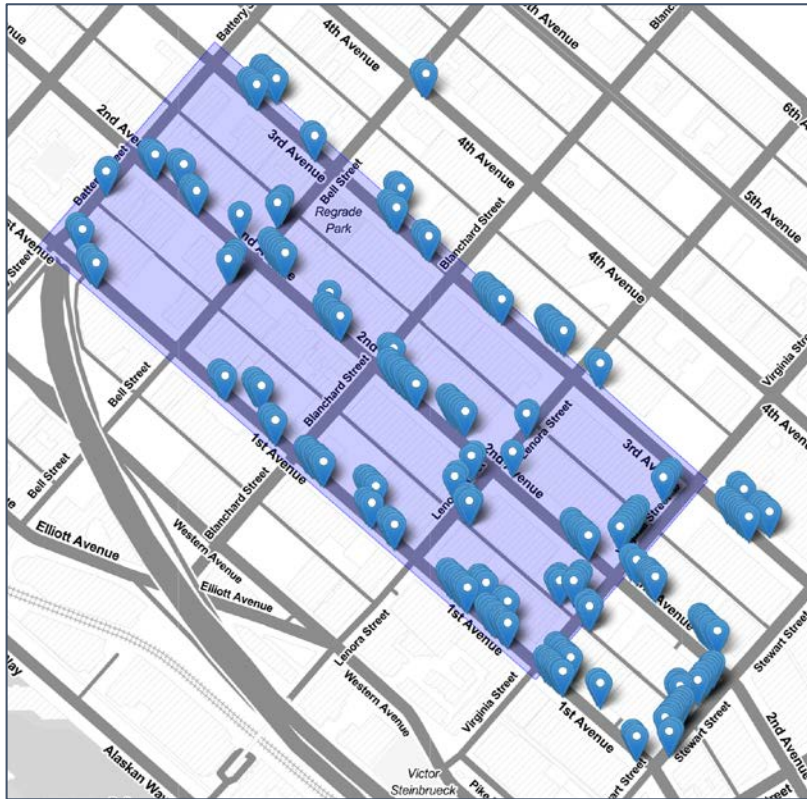
Queueing



# We have developed a real-time parking occupancy information & prediction app for commercial drivers to help them find parking spots easier.

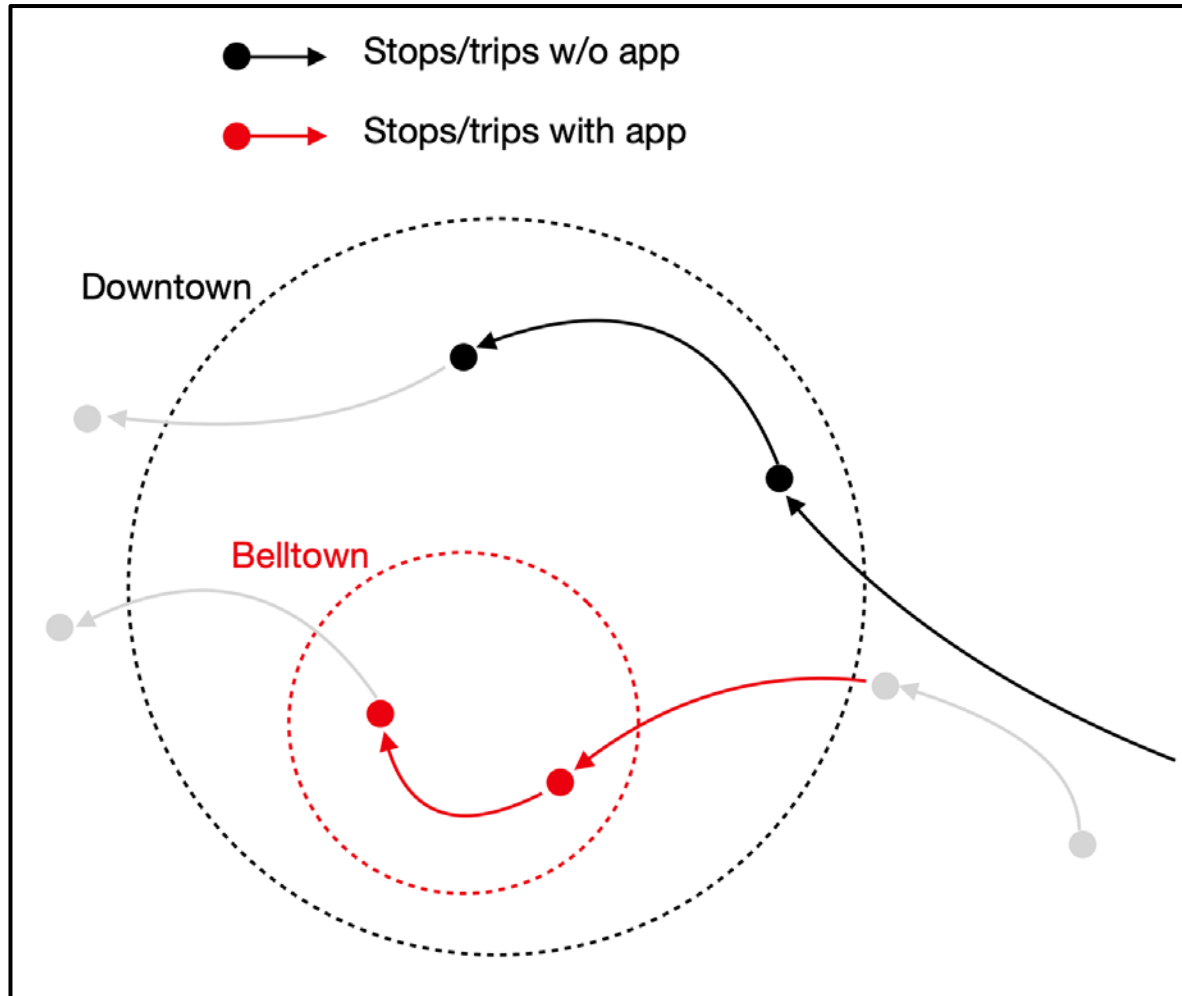


# Sensor Deployment and App Development



- 10-block area in Seattle
- 273 magnetic field sensors
- CVLZs + PLZs
- Real-time and predicted parking occupancy

# Evaluating the Solution



- The app is expected to:
  - inform real-time parking decision
  - reduce parking seeking behavior
  - improve delivery efficiency
  - improve traffic conditions
- We designed an experiment with two groups of drivers:
  - #1: Delivering using the app
  - #2: Delivering without the app
- We measured:
  - Dwell time
  - Cruising time for parking
  - Deliveries per stop
  - Stops per route
- Data was collected in June-July.
- Results TBD ...

# Thank you for your time!

## Questions?

- Andisheh Ranjbari
- Director, UFL, University of Washington
- [ranjbari@uw.edu](mailto:ranjbari@uw.edu)

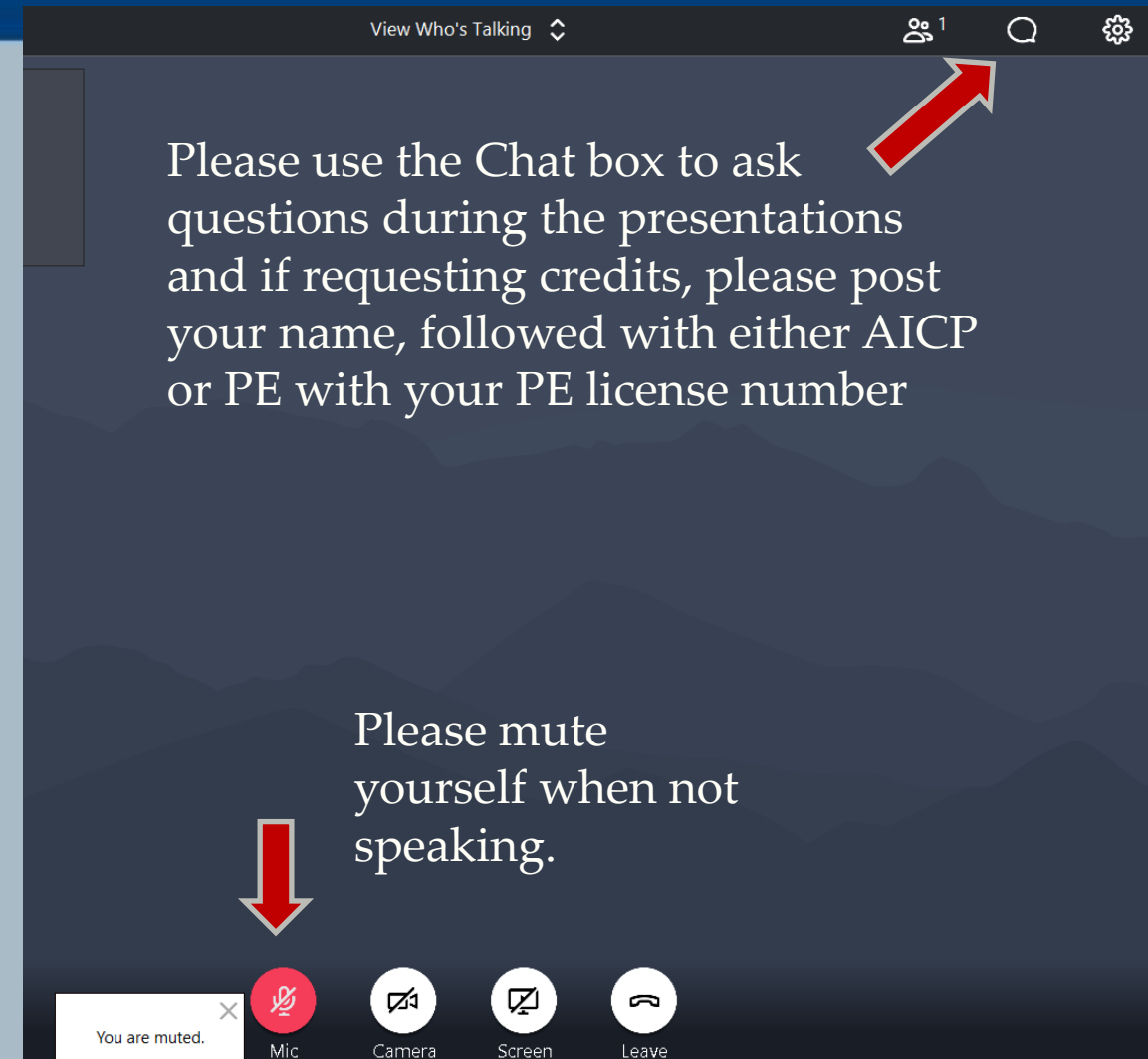
## Read more about UFL's work:

- <http://depts.washington.edu/sctlctr/>
- @SCTLatUW
- @SCTLCenter
- <https://www.linkedin.com/school/uwsupplychain/>



# August Freight Initiatives Committee Presentations and Discussion

- **New York City**, Diniece Mendes, Director, Freight Mobility, New York City Department of Transportation
- **Washington, DC**, Laura MacNeil, Freight & Urban Delivery Planner, District Department of Transportation
- **Seattle**, Andisheh Ranjbari, PhD, Director, Urban Freight Lab, University of Washington



A screenshot of a Zoom meeting interface. At the top, it says 'View Who's Talking' with a dropdown arrow, a '1' next to a person icon, a chat icon, and a settings gear icon. A red arrow points from the chat icon to the text below. The main text reads: 'Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number'. Below this, another red arrow points down to a 'You are muted.' notification box. To the right of the notification box, the text says: 'Please mute yourself when not speaking.' At the bottom, there are icons for 'Mic' (with a red slash), 'Camera', 'Screen', and 'Leave'.

View Who's Talking 1

Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

You are muted. X





Mic Camera Screen Leave

# August Freight Initiatives Committee Agenda

- Roll Call of Members
- Approval of Minutes
- Update on NJTPA Freight Division Activities
- Effective Urban Goods Movement Mgmt Practices
- **Two-Minute Reports on Freight Activities from Committee Members**
- **Next Virtual Meeting: October 18, 2021**
- **Adjournment**






*Thank you. Stay healthy and safe.*



View Who's Talking   1  

Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

Please mute yourself when not speaking.

You are muted.   Mic  Camera  Screen  Leave

A red arrow points from the chat icon in the top right corner of the Zoom interface to the text "Please use the Chat box...". Another red arrow points from the "You are muted" notification box to the "Mic" icon in the bottom toolbar.