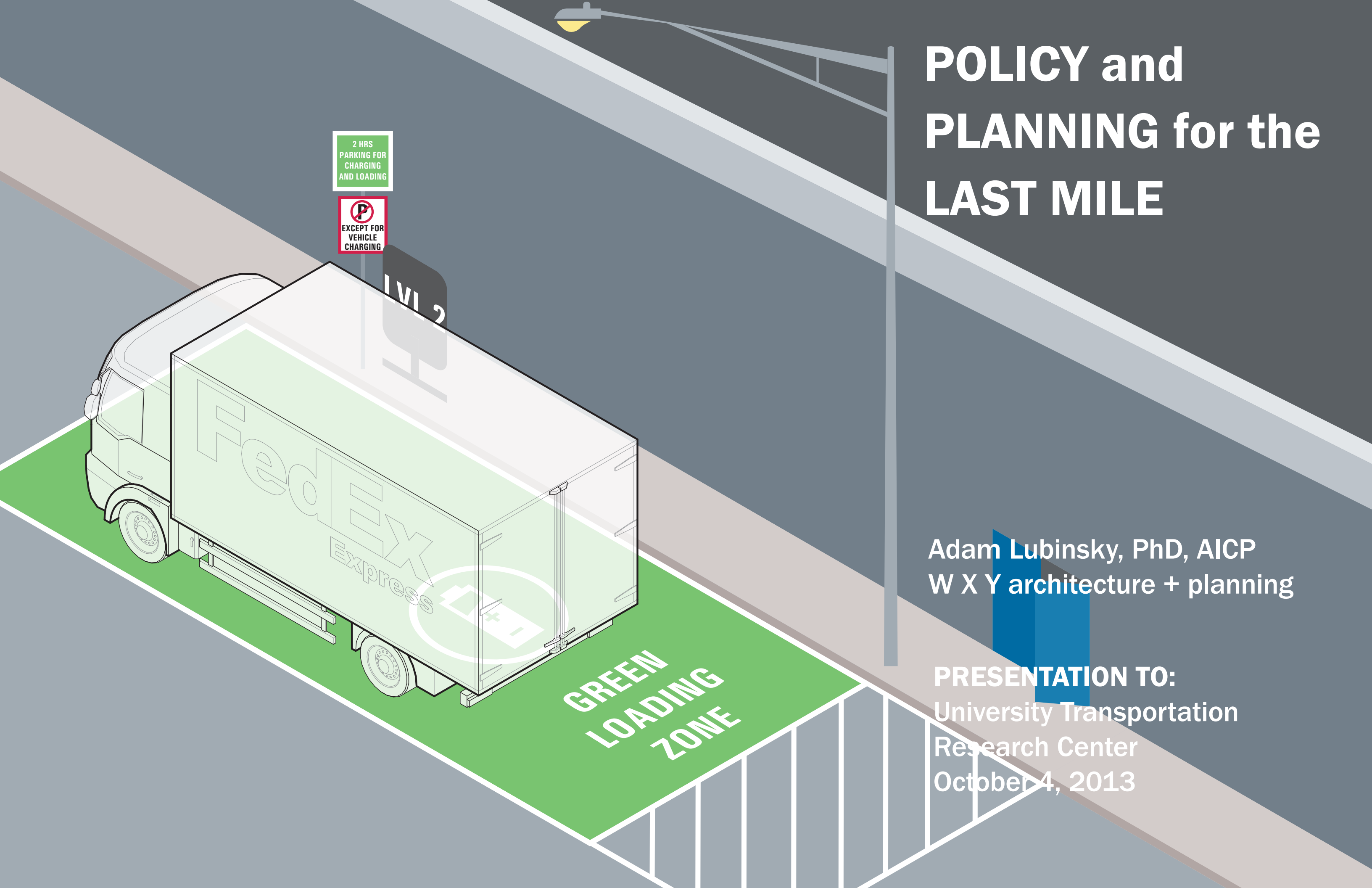


POLICY and PLANNING for the LAST MILE



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W X Y architecture + planning

PRESENTATION TO:
University Transportation
Research Center
October 4, 2013

1/ PARADIGMS

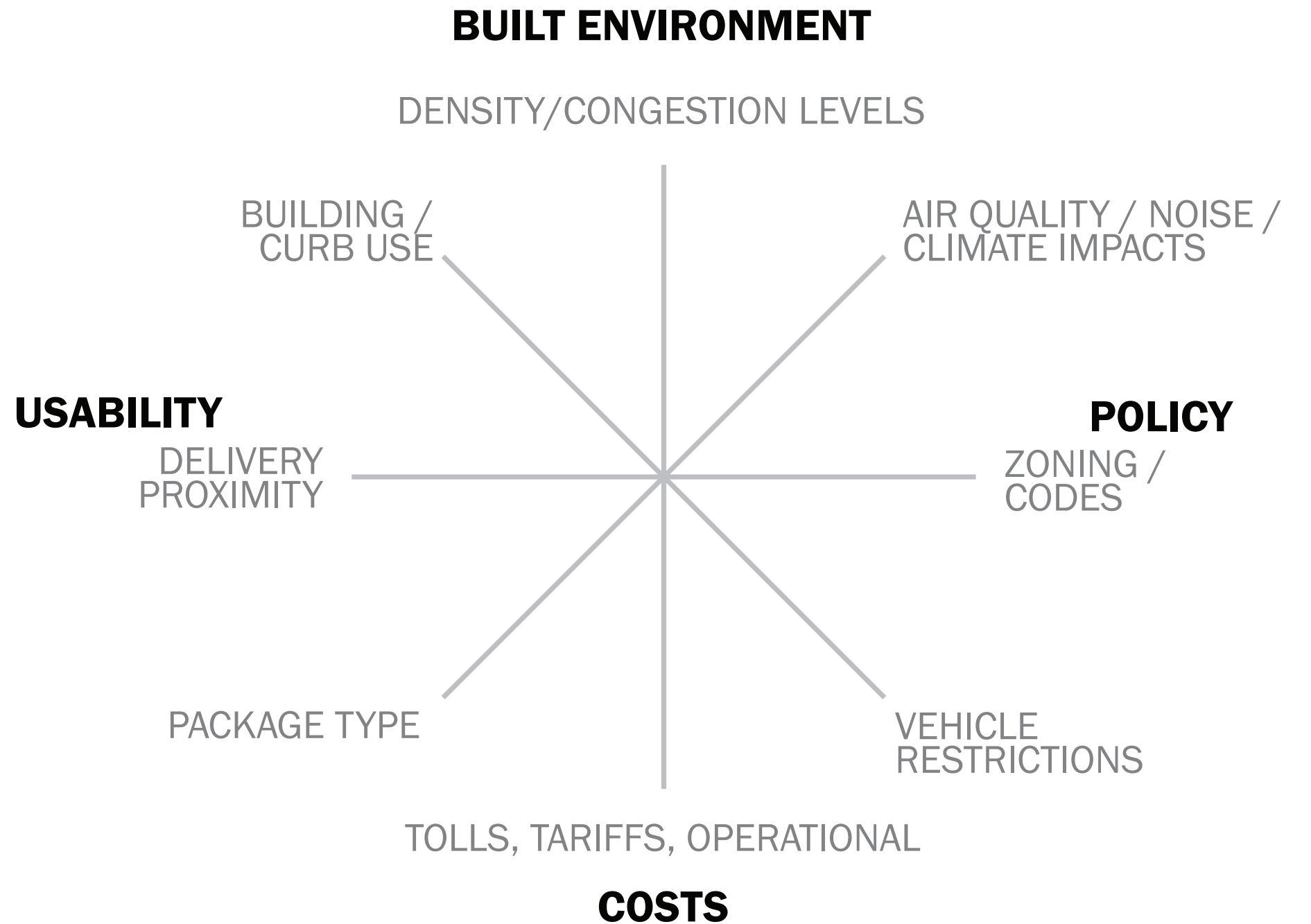
/ Road Pricing

/ Urban Distribution Centers

/ Individual Buildings

/ Drop off Points

/ Curbside



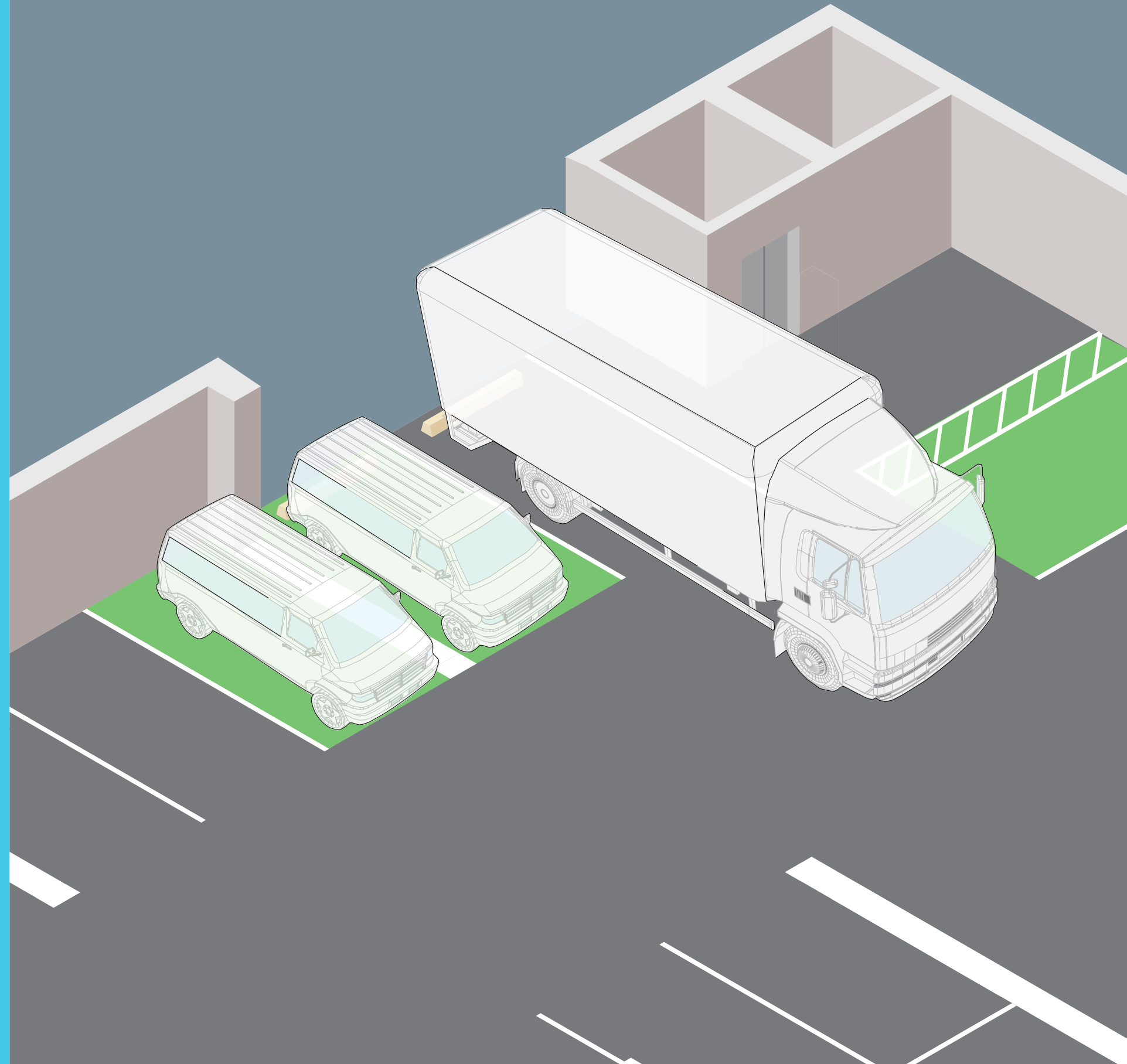
/ URBAN DISTRIBUTION CENTERS

BENEFITS

- Reduced congestion
- Reduced pollution / noise / fuel consumption

CHALLENGES

- Capital / operational
- Additional handling stage in the supply chain
- Security / liability
- Customer Service Issues



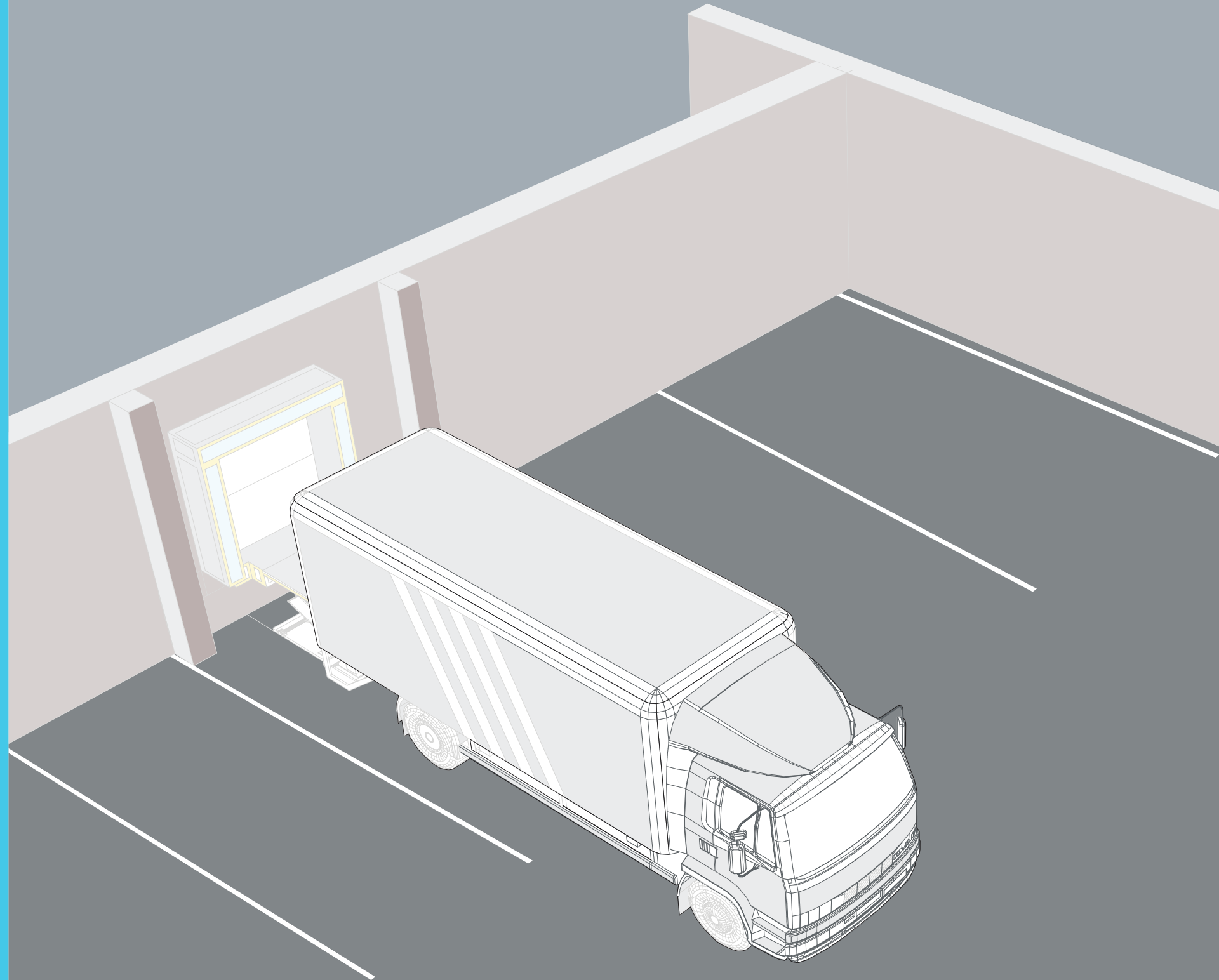
/ INDIVIDUAL BUILDINGS

BENEFITS

- Put freight vehicles out of site
- Increases on-street parking space
- Safety of deliveries
- Potential for storage and other freight uses

CHALLENGES

- Impairs street-level environment/interface
- Reduced usable building space – esp. ground floor retail
- Large vehicle maneuvering
- Lacks flexibility for future change



/ DROP-OFF POINTS

BENEFITS

- Avoids congestion caused by deliveries on residential streets
- Provides convenience to residents in buildings without doormen
- Creates foot traffic for stores

CHALLENGES

- Creating the right business partnerships
- Conflicts with existing store usage



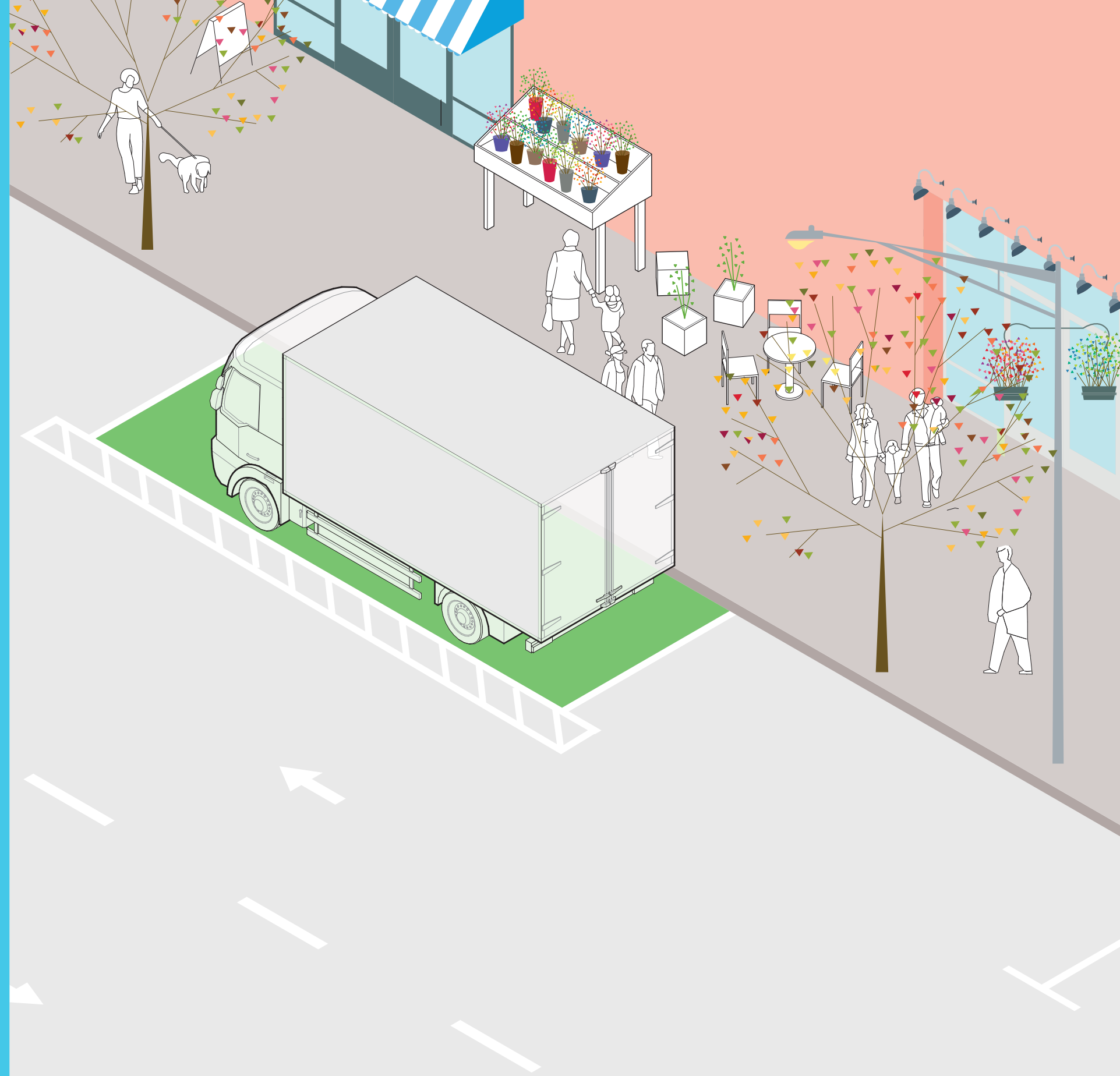
/ CURBSIDE

BENEFITS - BUILT ENVIRONMENT

- **Easy access to delivery points**
- **Use existing infrastructure for electricity - e.g. street lamps**
- **Manage congestion & blocked lanes**

CHALLENGES -- BUILT ENVIRONMENT

- **Pedestrians in the way**
- **Public transportation (Bus stops, bus shelters, subway entrances)**
- **Bicycle Lanes**
- **Taking away public space**
- **Street furniture – conflict with**
- **Impacting traffic patterns**



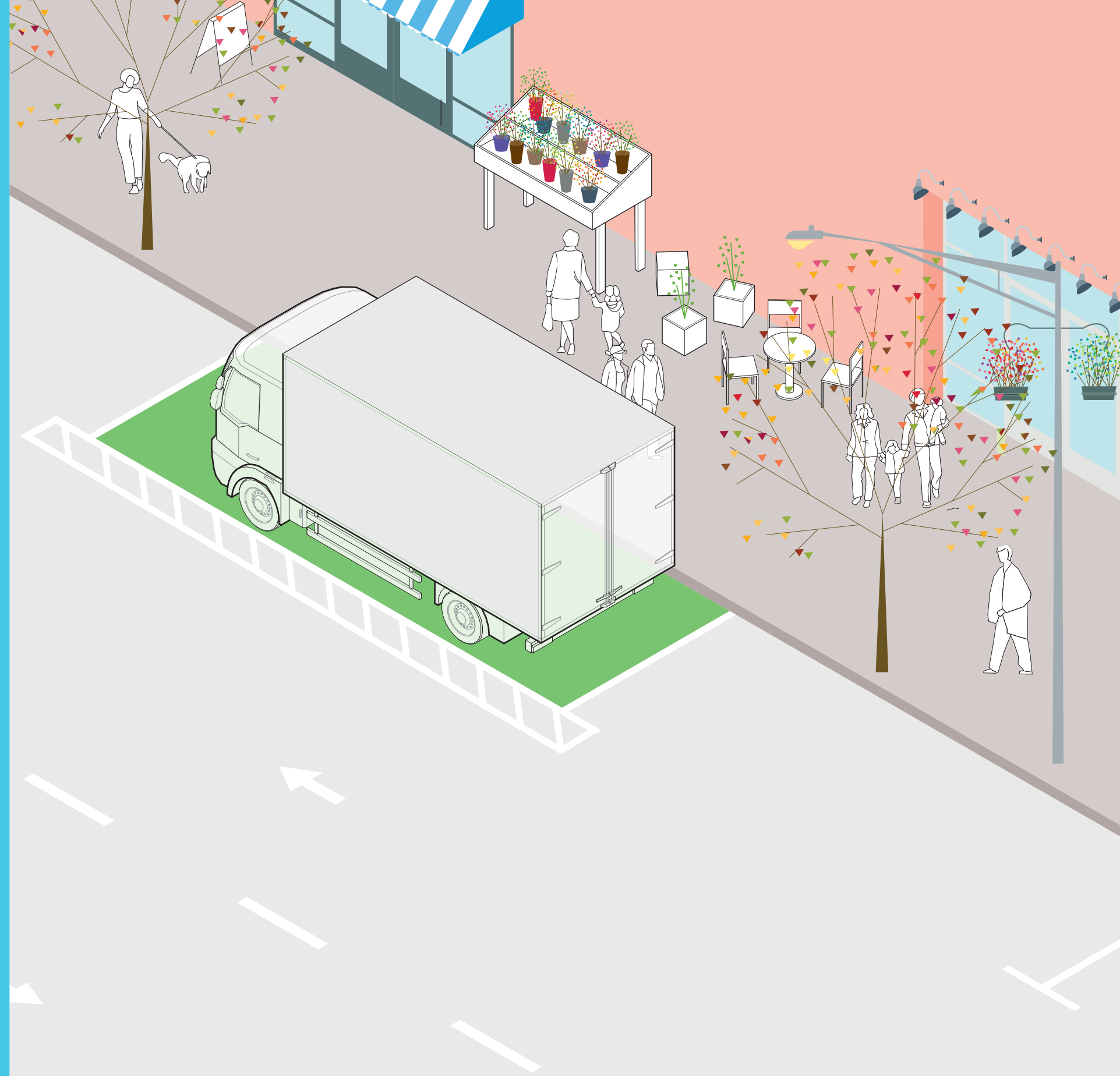
/ CURBSIDE

BENEFITS - POLICY

- Space for alternative freight vehicles
- Optimization - sensors/apps
- Off-hour deliveries
- Green loading zones

CHALLENGES -- POLICY

- Lengthy public review process
- Enforcement
- Communicating policy to general public and fleets
- Traffic impacts (ped, bike too)
- Working with existing regulations
- Consensus among deliverers/businesses



2 / CURBSIDE

/ Space for Alternative Freight Vehicles

/ Optimization - sensors/apps

/ Off-Hour Deliveries

/ Green Loading Zones

2 / OPTIMIZATION - NEW TECHNOLOGIES

/ Availability

/ Scheduling

/ Charging

/ Management +
ticketing




2 / OFF-HOUR DELIVERIES + TIME OF DAY

1 hour metered parking



ELECTRIC TRUCKS ONLY
OTHERS NO STANDING

Monday - Friday
7am - 9am



2 hour metered parking

COMMERCIAL VEHICLES ONLY
OTHERS NO STANDING

Monday - Friday
9am - 6pm



2/ GREEN LOADING ZONES

/ What is the concept?

- + **prioritize EV trucks in new or existing loading zones for certain times of day**
- + **incentivize fleet owners to purchase EV trucks**
- + **target trucks, not cars due to air quality issues**
- + **simpler policy approach than low emission zones**
- + **may have charging infrastructure or may simply provide space for EV trucks**

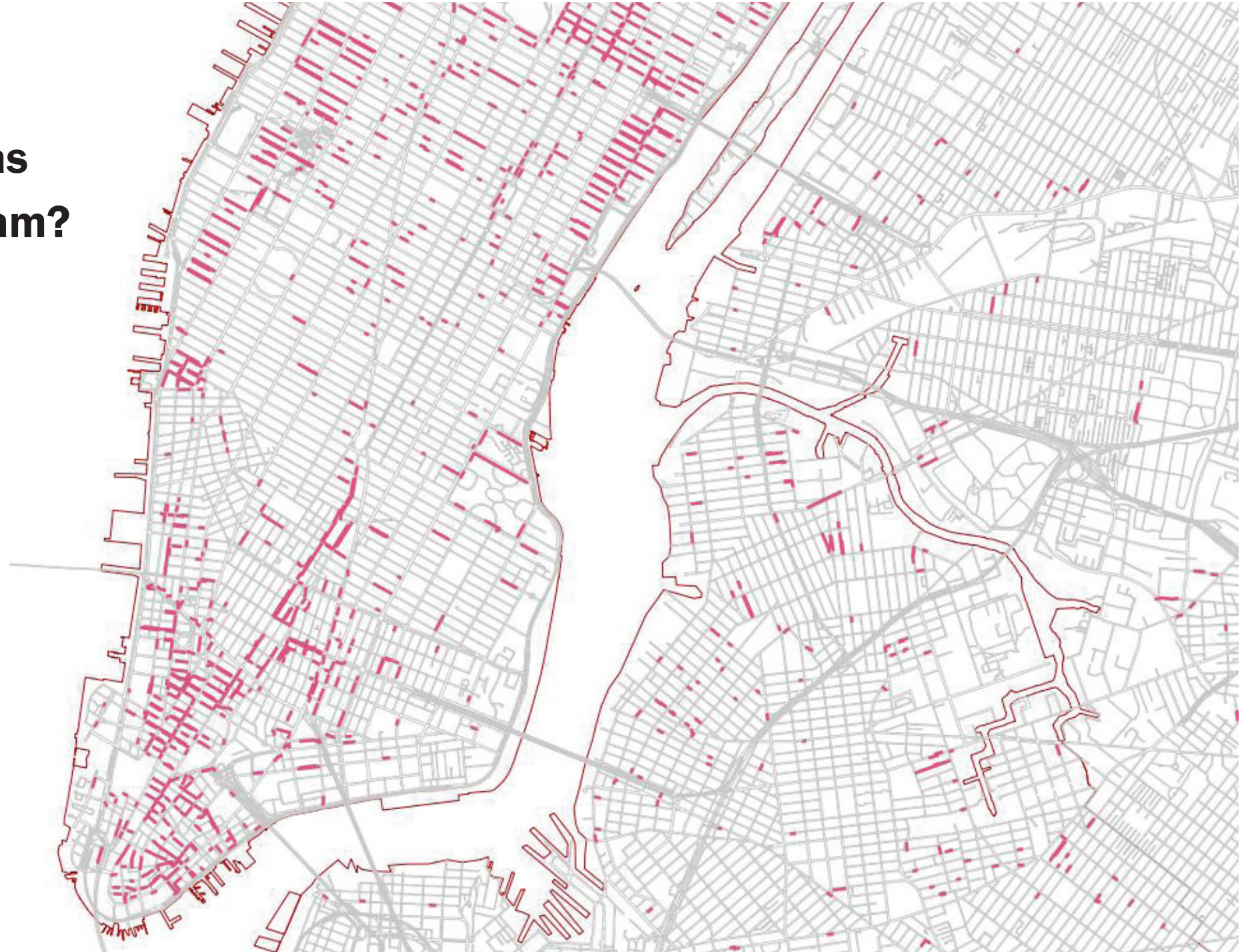


2 / GREEN LOADING ZONES

NO STANDING ZONES

/ BUILT ENVIRONMENT

- + EV trucks are quieter
- + Brands stores and areas as green- certification program?
- + Appropriate locations?
- + Installation concerns
 - electricity access?
 - drainage?
 - impediments?
- + Signage & way finding
 - must follow MUTCD

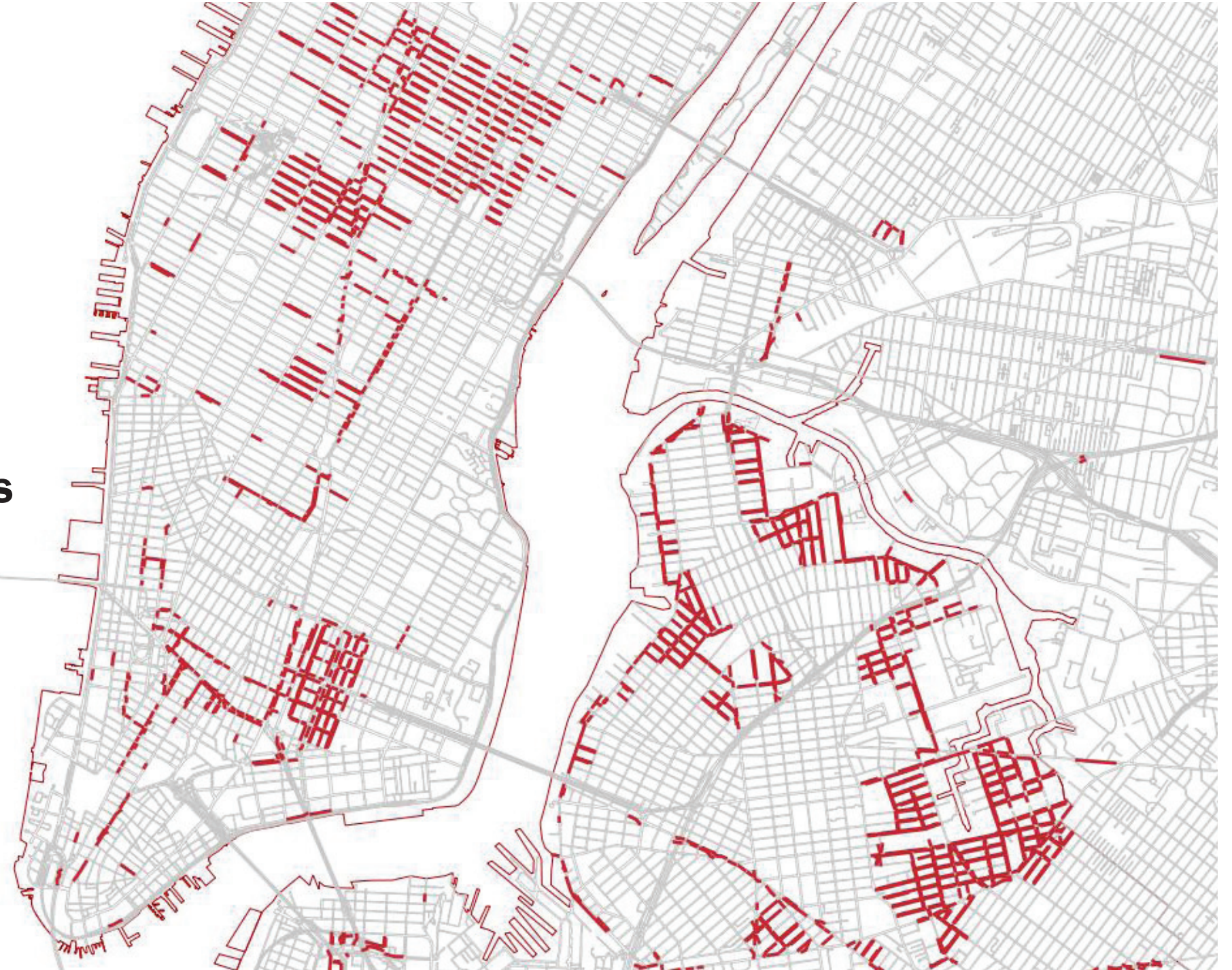


2/ GREEN LOADING ZONES

NIGHT LOADING ZONES

/ POLICY

- + What agency has authority over installation?
- + What is the public review?
 - Historic Districts
 - Design Reviews
- + How is enforcement and competition with other fleets handled?
- + Could fleets have overall emission requirements?
- + Could neighborhoods allow only zero emission trucks?
- + Could developers get FAR bonuses for providing charging infrastructure?



2/ GREEN LOADING ZONES

/ COSTS

- + **Low-cost, esp. if no infrastructure**
- + **Can City charge for charging or unloading?**
- + **Fleets save on parking tickets if there is dedicated EV unloading space**
- + **What is the cost of enforcement?**

