Final 50 Feet: Urban Goods Delivery Research Project

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More online shopping means more delivery trucks. Are cities ready?

People want the urban goods delivery system to work so well that they get whatever they want, where they want it, in 1 to 2 hours.

This is causing tremendous pressure on local governments to rethink the way they manage street parking and alley operations for trucks.

What can Metropolitan Planning Organizations (MPOs), and state and city Departments of Transportation do to accommodate customer demand in valuable street, curb, and alley space?
How is e-commerce changing cities?

Source: https://www.census.gov/retail/index.html
Thousands of customers in just one building

Photos by UW SCTL Center, 2016
Consumer expectations are also rising

**Next-day delivery**

2 in 3 shoppers expect to be able to place an order up to 5:00 pm the night before for next-day delivery.

**Same-day delivery**

3 in 5 believe orders that are placed by noon should be delivered the same day.

1 in 4 believe that orders placed by 4:00 pm or later should still be delivered on the same day.

*UPS Pulse of the Online Shopper, 2016*
The Urban Freight Lab

- Members of the Urban Freight Lab at UW, in partnership with the City of Seattle Department of Transportation, are using a systems engineering approach to solve delivery problems that overlap cities’ and businesses’ spheres of control.

- The Urban Freight Lab is a living laboratory where potential solutions are generated, evaluated, and pilot-tested inside urban towers and on city streets.

- Members of the Urban Freight Lab fund the Lab and dedicate senior executives’ time to it.
  - Charlie’s Produce
  - Costco Wholesale
  - Nordstrom
  - UPS
  - USPS
Final Fifty Feet Research Project

The final 50’ of the urban delivery system:

- Begins at the city-owned Commercial Vehicle Load Zone (CVLZ) or alley,
- Or in a privately-owned building’s loading bay or dock, and
- Ends wherever the owner takes receipt of goods.

Photo by University of Washington
The Final Fifty Feet is a New Research Field

The Final 50’ project is the first time that researchers have analyzed both the street network and cities’ vertical space as one unified goods delivery system.

It focuses on:
• The use of scarce curb, buildings’ internal loading bays, and alley space;
• How delivery people move with handcarts through intersections and sidewalks; and
• On the delivery processes inside urban towers.

Photo by Anna Bovbjerg, UW
Final 50’ Research Project Goal #1

**Reduce dwell time**, the time a truck is parked in a load/unload space.

Public and private benefits include:

- Lower costs for delivery firms, and therefore potentially lower costs for their customers;
- More efficient use of truck load/unload spaces creates more capacity without building additional spaces; and
- Room for other vehicles to move through alleys.
Final 50’ Goal #2

Reduce failed first deliveries to:

• Improve urban online shoppers’ experiences and protect retailers’ brands;

• Lower traffic congestion in cities, as delivery trucks could make up to 15% fewer trips while still completing the same number of deliveries;

• Cut costs for the retail sector and logistics firms;

• Cut crime and provide a safer environment;

• Ensure that all city neighborhoods can receive online orders, not just a few.
Urban Freight Lab
Final 50’ Research Project Timeline: Year 1
Questions?

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