

Planning Can't Forget Freight

Communities are struggling to understand how disruptive technologies like connected and autonomous vehicles (CAVs) will affect the built environment. Within the planning profession, that conversation has mainly focused on passenger vehicles, neglecting a critical aspect of any livable community: freight.

What good is a walkable neighborhood if the corner store you walk to is out of milk? Urban delivery vehicles provide life's daily necessities—food, beverages, medical supplies, clothing, and ultimately refuse removal—that create a livable neighborhood. As the old saying goes, “if you bought it, a truck brought it.”

Despite their importance, trucks have been largely overlooked by the complete streets and livable communities movement. Let me be clear, neighborhoods should not be designed around large trucks. However, trucks (in varying configurations) and the built environment should be integrated to create truly livable communities. The results of not doing so are often double-parked trucks. In 2013, FedEx and UPS made news by owing \$2.8 million in parking fines to New York City. While parking fines are designed to act as a deterrent, they often become the cost of doing business for many trucking companies. Similar issues can be found on many courthouse squares across the nation.



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A fundamental shift in transportation is occurring. As with the traditional model of car ownership, the nature of urban freight deliveries is morphing as mobility as a service (MaaS) and CAVs enter the market. We must use this opportunity to integrate freight into the built environment.

Like transit, freight encounters last-mile challenges. As e-commerce grows, deliveries are shifting from large retail centers to individual homes. Just as it is prohibitively inefficient to serve an individual home with a traditional bus, large parcel trucks face similar challenges in many suburban communities. And just as many transit agencies have embraced MaaS (Uber, Lyft, etc.) to solve these challenges, so has freight.

Amazon recently debuted “Amazon Flex” as a freight mobility as a service (FMaaS) solution to contain costs and support quick deliveries. In more than 50 cities, just about anyone with a car and a smart phone can pick up parcels at a distribution center, route drop-offs, and make deliveries. In Washington, D.C., the third-party delivery app Postmates is moving

into a new mode of transportation: 20 autonomous robots that deliver food from local restaurants to people's homes. While these changes are very convenient for residents, planners must consider what they mean for large residential buildings and pedestrians who must share sidewalks with delivery robots.

Similarly, truck platooning—once a conceptual idea—is now close to a reality. Platooned trucks technologically synchronize their operations, which allows the trucks to run closer together. While they have been successfully tested on public roadways, major questions remain. What happens when the platoon leaves the freeway and transitions to the local road network? Are the efficiencies gained over the long distance lost in the local handoff?

The long-term implications of FMaaS and CAVs are uncertain, but that doesn't mean we can't start planning.

I worked with fellow planners to develop a set of policy principles that can be used to advocate policies that successfully integrate CAVs into our communities; they're posted in full at planning.org/policy/principles/av. Many of the near-term recommendations relate to freight. For example, as more passenger trips shift to MaaS or CAVs, parking spaces can be reclaimed for urban deliveries. The principles also explore how large truck platoons might interact with the local road network, or how deliveries made by shared-use vehicles impact the urban fabric.

As disruption of the urban delivery market continues, city-wide and subarea freight strategic planning will be essential. Solving these challenges will be critical to building the livable communities of the future. Our profession is uniquely suited to address both the land use and transportation aspects of solving the urban freight challenge. It is imperative that we act.