



Competitive Cities, Urban Access, and Sustainable E-Commerce

October 2017





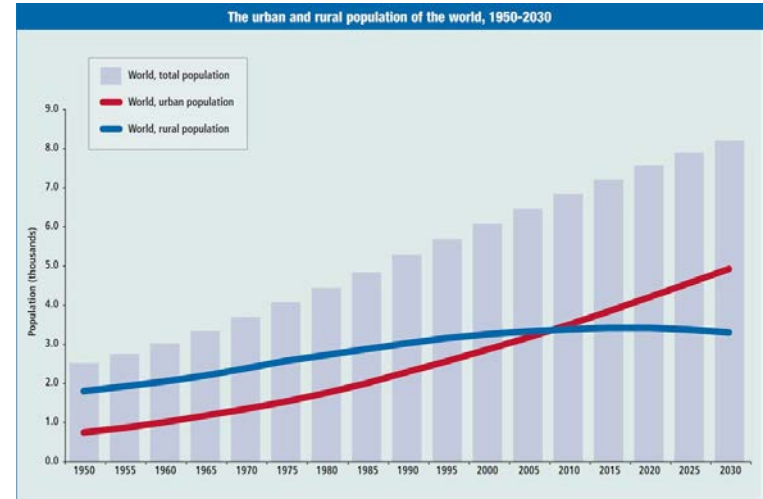
Global Megatrends

Population increase and urbanization

Dramatic increase in urban movements
of people and goods

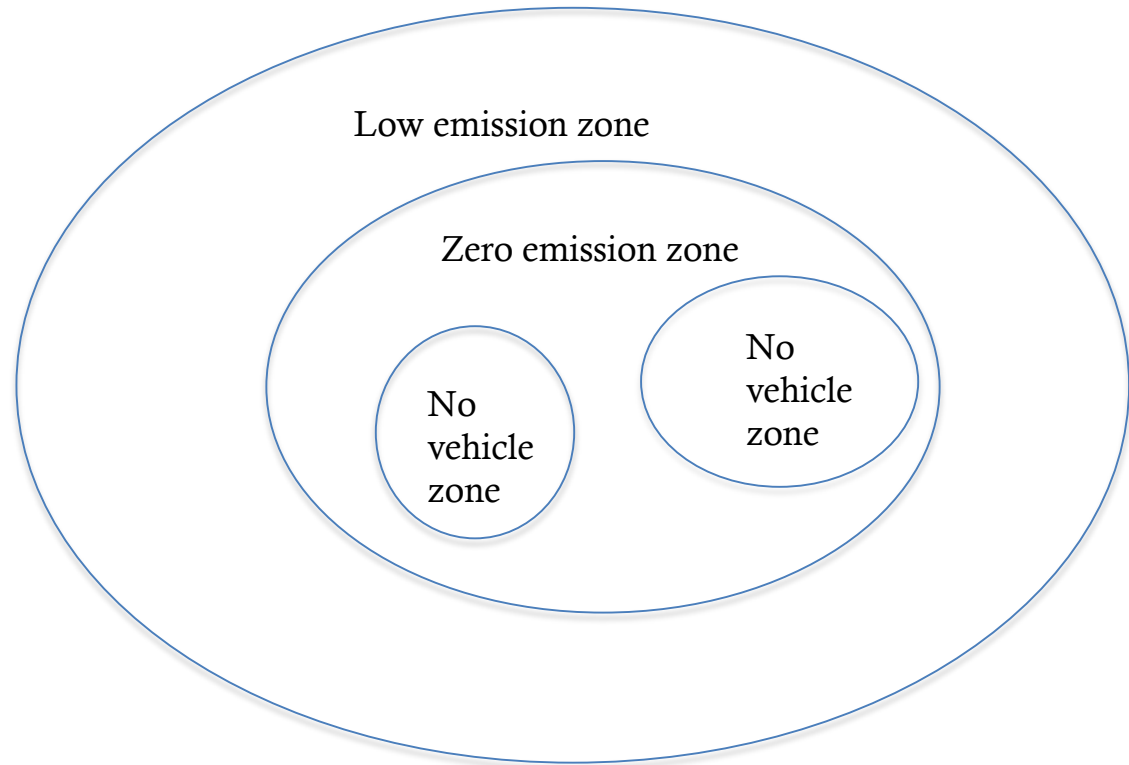
Emissions, congestion and noise

City action to require new models of
transport



The Future Delivery Landscape: Legal Restrictions on Vehicles in Cities

- Potential regulations: emissions, vehicle use, noise, size/weight, time of day.



UPS Urban Delivery Strategy

- **Intersection of Three Trends:**
 - Cities are growing -- 70 percent of global population becomes urban by 2050
 - E-commerce demand growing
 - Sustainability, congestion and quality of life concerns increasing
- **Cities will address these as the urban problem:**
 - Will we be a partner or target?
 - Transform risk into opportunity, using technology, advocacy, ingenuity and our unique role in secure package delivery
- **What does that look like?**



Additionally, Future Last Mile Delivery Landscape: Determined by Delivery Density and Built Environment

- **Delivery areas vary by:**
 - relative density
 - built environment
 - building type
 - road/sidewalk width, egress,
 - parking availability
- **Optimal Efficiency:** match last-mile mode to the delivery area.

Urban

Suburban

Rural



Walking / Handcart Innovations / Delivery Robot / Etc.

E-Trike, Mobile Package Depot, Other Delivery Innovations

Golf cart – planned communities

Electric truck

Truck, sized to density, route, cargos

Hybrid truck

Surepost

Drone, Alternative Delivery Location

Overall Delivery Strategy

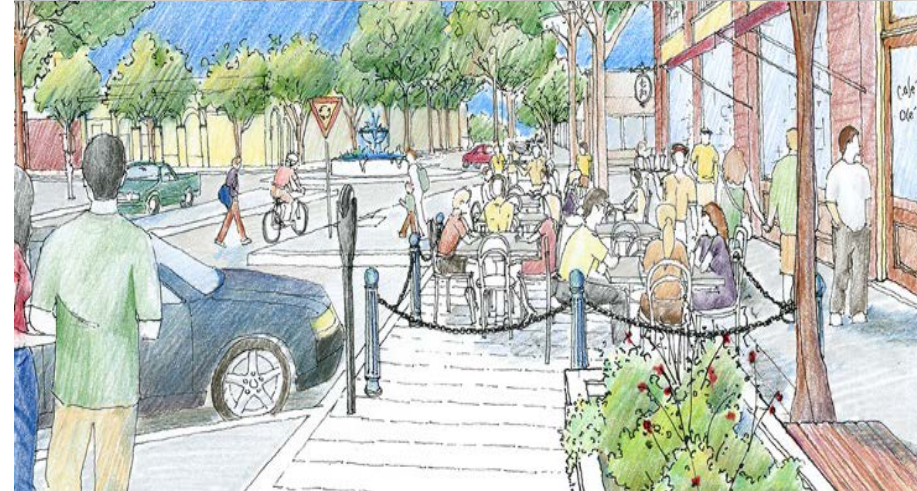
- UPS innovating and optimizing throughout that last mile delivery spectrum
- Perhaps the greatest opportunity to innovate in the opposite ends of that spectrum – urban and rural
- Partnering in cities requires collaboration, both with city officials and academics / NGOs / other third-party validators
- **UPS already “partnering” in several cities:**
 - Hamburg (e-trike)
 - London (hyper urban delivery trailer + e-assist)
 - Dublin (e-trike)
 - Paris (alternative delivery testing)
 - Plus many more, including: Frankfurt, Munich, Oldenburg, Stuttgart, Mannheim, Cologne, Essen, Aachen, Herne, Leuven, Meechelen, Toulouse, Vienna and Rome
- **UPS exploring partnerships:**
 - Seattle (e-trike, working with UW Urban Freight Lab)
 - Pittsburgh (e-trike for air walkers)
 - Toronto (trike, no e-assist)
 - Singapore (universal locker system)



What Do Urban Planners See As The Fix For Urban Congestion?

Shared Urban Mobility for People

- Ride-sharing services (Uber, Lyft, etc.) to counter 1 person, 1 vehicle
- Autonomous vehicles, especially electric
- Shared mobility expansion, especially bus and metro
- Walkable, transit-oriented development and bike lanes
- ***E-commerce delivery is rarely included in discussions on urban congestion mitigation.***

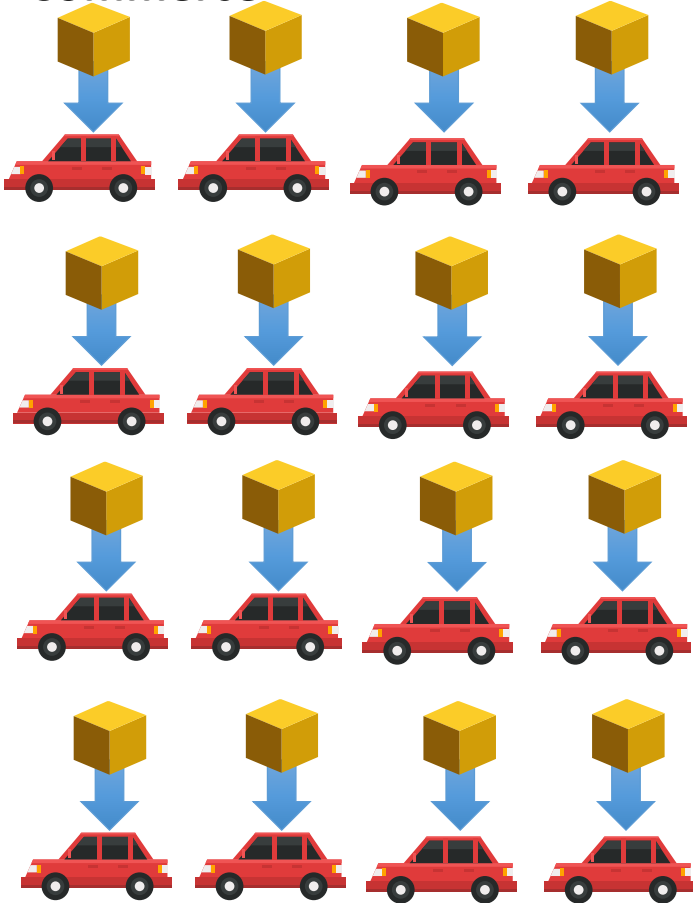


Strategy Implementation

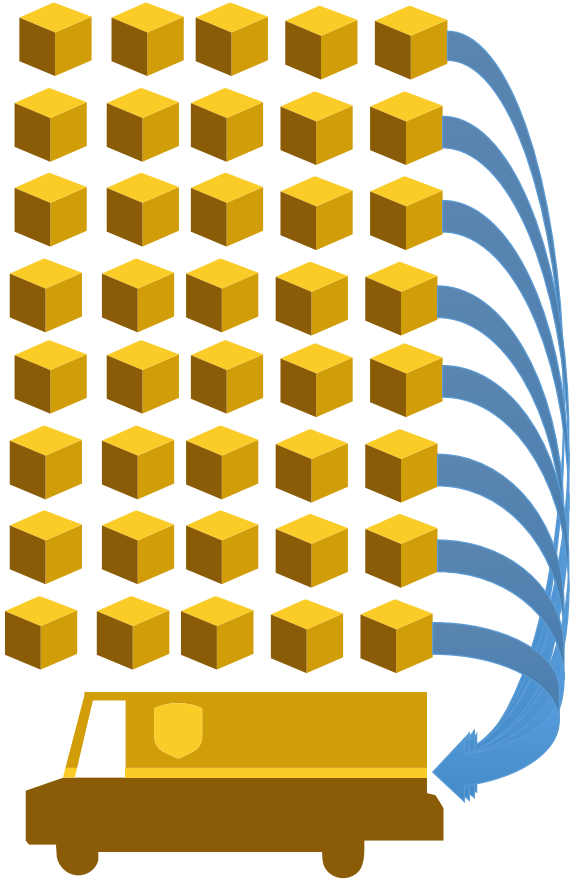
- Engage with cities seeking to become people-centric metropolises
- Convince cities that leading residents not to rely on personal vehicles requires:
 - Secure and reliable package and freight delivery built into urban planning
 - Shared mobility for people, but also shared mobility for parcels
 - UPS -- as part of the solution, not the problem
- Determine what access is the city willing to give/rent/sell?
- Explore innovative ideas for secure parcel delivery -- lockers, alternative access points, alternative fuel vehicles, zero truck solutions
- Determine changes needed to our buildings
- Exploit opportunities for thought leadership, brand positioning, media



A World Without E-Commerce



A World With E-Commerce





Striving Toward The Future

What is the role of e-commerce in walkable cities?

- E-Commerce is a kind of hidden infrastructure that facilitates city goals toward walkability, reduced congestion and smart growth
- Deliveries are essential to local businesses and residents

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Walk in



U.S. Experience

Moving Toward Pilot Projects In DC, Seattle and New York

- Interest in e-Trike – city employee visions of mayor cutting the ribbon
- University of Washington
Civil Engineering Urban Freight Lab,
Georgetown University, RPI and other
academic partners
- Graduate students mapping city to
accommodate parcel/freight
- Cities have a vested interest in working with
UPS to develop mutually beneficial
solutions
- E-commerce is key to future
urban planning
- Thought leadership opportunities, Atlantic
article and various speaking engagements



Next Steps

Engage early with city planners in selected cities

Accelerate innovation/technology in a few willing cities: develop model sites

Scale and share best practices and toolbox of “bright shiny objects,”
catalyzing cascade effect

Create strategic partnerships – academic and NGOs

Project thought leadership in urban design

Write the Rules of the Game to Drive Business Results