Case Study: Urban Logistics

U.S.-ASEAN Smart Cities Partnership: Smart Mobility Webinar IV
Working with the Private Sector

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About UPS

• World’s largest package delivery company and a global leader in supply chain services
• 21.9 million packages and documents per day
• Over 3% of global GDP moves around world in UPS trucks and planes
• Serves more than 220 economies and territories around the world.
• High value-add manufacturers, urgently needed replacement or repair parts, samples & late orders, small volume shipments, commercial documents.
• Hi-Tech, Healthcare, Aerospace, Industrial Manufacturing, Retail, e-Commerce
• Enabler of global value chains and e-Commerce.
Global Megatrends

Competition for talent is steep as organizations aim to build a workforce fit for the future.

- A global talent shortage of 85 million people by 2030
- Hardest roles to fill are engineers, technicians, and drivers

Emissions and pollutants from fossil fuel combustion and other sources are accelerating the impacts of climate change and poor air quality in cities.

- 20% global energy and process-related CO2 emissions from heavy transport
- 90% of people worldwide breathe polluted air

More people will continue to buy more things online.

- 10% of U.S. retail sales via e-commerce
- $5 billion spent globally on digital commerce platforms

A growing share of the world’s population lives in cities.

- 65% by 2050
- 3 million+ people moving weekly

Emerging economies are fueling GDP growth.

- 62% of total growth in global consumption by 2030
- GDP growth over the next 20 years concentrated in Asia, Latin America, and ISMEA
What happens when we burn fuel?

Transport Sector has an Outsized Role

\[ C_x H_y + O_2 + N_2 \rightarrow H_2O + CO_2 + C + NOx \]
UPS Global Sustainability Goals

Environmental

- **12% by 2025** Reduction in Absolute GHG Emissions in Global Ground Operation
- **25% by 2025** Electricity from Renewable Sources
- **40% by 2025** Alternative Fuel as a Percentage of Total Ground Fuel
- **25% in 2020** Total Vehicles Purchased Annually that are Alternative Fuel or Advanced Technology Vehicles
Our Strategy

Urban Distribution Vehicle Electrification

Fleet Electrification (EVs)  Cycle and Walker Solutions
Fleet Electrification (EVs)

Case Study: Smart Electric Urban Logistics (SEUL) - UK

- Smart Electric Urban Logistics (SEUL) project, a UPS-led consortium, deployed game-changing technology enabling simultaneous recharging of electric fleets.
- Launched in April 2017 in collaboration with UK Power Networks, Cross River Partnership and the UK’s Office for Low Emission Vehicles.
- Developed smart charging system enabling UPS to charge entire central London fleet of 170 vehicles at the same time.
- Estimated 70% average savings on grid upgrade costs otherwise needed.
The power infrastructure challenge
Cycle and Walker Solutions

Lessons from our eBike Journey

1. Bikes work best in dense environments

UPS is collaborating on a six-month pilot with other logistics companies to reduce delivery related congestion in New York City. The bikes will be concentrated in the most congested parts of Manhattan and will have access to commercial loading areas, sidewalks, and more than 1,250 miles of bike lanes.

2. Many customers means more efficient delivery

Campus environments—where thousands of potential customers live and work in a condensed area—are ideal for bike delivery. At Trinity College Dublin, UPS eBikes now make deliveries from a package hub on campus, and students and staff can collect parcels from storage lockers any time of day.

3. Partnership with cities is key

UPS eBikes play a role in helping Copenhagen and Stockholm be carbon-neutral by 2025 and 2040, respectively. UPS will replace 350 daily stops previously made with conventional fuel vehicles through emissions-free bike deliveries. We coordinated with each city to establish Eco Hubs at UPS Access Point® locations.
Cycle and Walker Solutions

Small Parcel Delivery - Traditional Model

Base Depot ➔ City Center

Delivery vans are effectively on the roads for the entire day, contributing to traffic congestion and carbon emissions.
The cycle/walker model seeks to overcome these challenges through the use of mobile consolidation centers within the city center, from which smaller carbon neutral e-cargo bikes will collect and do final delivery of packages.
Policy Recommendations

- Providing funding and operational privileges to support the deployment of alternative technologies and their associated infrastructures until they are able to support themselves commercially.

- ASEAN-wide harmonisation (in line with global harmonisation efforts) of city access measures on a “freedom within a framework basis” to provide clarity, continuity, reasonable lead times.

- Review of provision of facilities or space in city centres to enable electrically cycle/walker operations, including micro consolidation sites, cycle parking locations and charging facilities.

- Encourage governments to invest in the development of infrastructure (parking, charging stations) to support electric vehicles deployment.
THANK YOU

Fatimah Alsagoff
Director of Public Affairs, UPS Asia Pacific
afatimah@ups.com