

Replacing delivery vans with ebikes

A surge in deliveries to residential addresses, thanks to the ubiquity of online shopping and the growing popularity of food and grocery delivery apps, has created a traffic nightmare as delivery trucks clog up roads all over cities. In dense, urban settings, the sheer number of truck deliveries makes a massive contribution to traffic and pollution. Addressing these issues, multinational package delivery group UPS is investing in ebikes to replace delivery vans wherever possible. This should also help the company to meet the ambitious sustainability goals it has set for 2025. Hedvig Armand, the Nordic head of Communication at UPS, highlights the UPS e-bike initiative in her region.

UPS has set itself the ambitious goal to reduce the absolute greenhouse gas emissions of its global ground operations by 12% by 2025. Increasing the use of ebikes is an important part of how the company plans to achieve this goal. In a way, this means it is going back to its roots: the company was formed in Washington's metropolis in 1907 and got its start by making deliveries on foot and by bicycle. At locations around the world, UPS is testing the same classic mode of transportation while aiming to increase

speed of delivery and efficiency while reducing traffic and pollution.

While UPS emphasises the sustainability aspect, ebikes are also practical in urban environments where they are particularly suitable in the final stages of delivery. A recent University of Washington modelled a range of delivery scenarios to determine whether bikes or vans costed more, varying distance from the distribution centre and the number of parcels per stop. It found that bikes are most cost-effective for distances of up to

two miles and a delivery route of below 20 parcels.

UPS first introduced ebike delivery in 2012, starting a pilot program in Hamburg, Germany. Similar initiatives have seen been rolled out at UPS locations around the world, including Rome, Dublin, and London. As Ms. Armand points out, these ebikes are just one way of the company's efforts in meeting its sustainability goals. "Introducing our Access Point network, and locker deliveries, a couple of years ago has improved the sustainability overall as our drivers now combine several deliveries to one stop, instead of driving every package to each location. We are also looking into other options as well, for example purchasing electric and gas vehicles as well as expanding the ebike fleet to other cities across the Nordics," she comments.



Ebike deliveries aren't well-suited for all cities; in Los Angeles, for example, the car-centric infrastructure doesn't lend itself to large-scale bike delivery services. European urban areas, however, particularly in the North, are far more pedestrian-centric and the infrastructure in most Northern European cities is cycle-friendly. Denmark, specifically, with its flat terrain, is a country where cycling is an important part of everyday life, and in Sweden, cycling is a growing trend.

So it made sense for UPS to introduce seven ebikes to carry deliveries in Sweden and Denmark, at the start of this year. The cargo bikes operate in the Swedish capital Stockholm, the Danish capital Copenhagen and Aarhus, also in Denmark. The bikes are electrically assisted and can carry up to 100kg in their front-fitted box. Employees cycle to and from local neighbourhood hubs to ferry the deliveries. UPS has calculated that the bikes will replace equivalent to 350 daily stops which previously would have been powered by fossil fuels. This will mean three fewer 7.50-tonne diesel delivery vehicles in Denmark and Sweden. "It is too early to say exactly, but as an example you can say that if all our ebikes are fully utilized that is equivalent to three delivery vehicles, meaning three less diesel trucks on the streets," Ms. Armand elaborates.

In January 2020, UPS' venture capital arm, UPS Ventures, completed a minority investment in Arrival, which makes electric vehicle (EV) platforms and purpose-built vehicles that offer a highly competitive value proposition when compared with both traditional internal combustion engine vehicles, as well as existing EVs. Along with the investment in Arrival, UPS also announced a commitment to purchase 10,000 electric



vehicles to be built for UPS with priority access to purchase additional electric vehicles. UPS will collaborate with Arrival to develop a wide range of electric vehicles with Advanced Driver-Assistance Systems (ADAS). The technology is designed to increase safety and operating efficiencies, including the potential for automated movements in UPS depots. UPS will initiate testing ADAS features later in 2020. Future vehicle purchases are contingent on successful tests of initial vehicles.

Arrival is the first commercial vehicle manufacturer to provide purpose-built electric delivery vehicles to UPS's specifications and with a production strategy for global scale. Since 2016, UPS and Arrival have collaborated to develop concepts of different vehicles sizes. The companies previously announced they would develop a state-of-the-art pilot fleet of 35 electric delivery vehicles to be trialled in London and Paris. Additionally, UPS announced a pioneering new approach to electric charging and storage that has now been deployed in UPS's central London facility.

"We are currently looking into several options for sustainable deliveries," says Ms. Armand. "In the Nordics, our local goal is of course to support and align with the cities where we operate, and we know that both Stockholm and Copenhagen have ambitious goals for reducing emission and noise levels. We are also supporting our own goal to reduce greenhouse gas emissions of our global ground operations as mentioned, and using eBikes in more than 30 cities in Europe is one way of supporting that goal."



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