Case Study

1. How Should Amazon develop environmentally friendly delivery services and increase awareness among customers for being carbon-neutral?

**Use zero-emission delivery fleets**

Last-mile delivery has traditionally relied on fossil fuel-powered delivery vehicles -- a notorious source of carbon dioxide emissions -- and supply chain leaders are beginning to look for alternatives to these.

Although delivery vehicles compose only a small portion of the traffic in urban centers, they generate more than half of overall emissions for certain contaminants, according to University of California Institute of Transportation Studies researchers. The use of zero emission and near-zero emission vehicles in the last mile is one way to help fight that. One concern about electric vehicles has been their limited range and performance compared to gas vehicles. But since 95% of parcel deliveries require ranges under 100 miles, commercially available zero-emission vehicles could easily fulfill these ranges.

Some cities are already exploring bicycle, drone and robot deliveries. Electric vehicles fall in this category as well.

1. How should ATS leverage all the existing transportation method to meet Amazons climate pledge objectives without compromising on speed and costs?

### Pack deliveries more efficiently

Since inefficient packing -- often as a result of the push for fast deliveries -- requires more vehicles to go out on the road, looking for packing efficiencies is a critical aspect of last-mile sustainability.

Consumer packaged goods companies are also finding ways to optimize the packaging dimension that reduces the pallets used, Zimmerman said. This can allow them to fit more products on each truck, lowering the total number of trucks on the road.

Teams can further [improve sustainability](https://www.techtarget.com/searcherp/feature/ERP-plays-vital-role-in-sustainability-trend) by considering how the final container is packaged for transit, said Tara Milburn, founder and CEO of Ethical Swag, a Certified B Corp located in Novia Scotia, that distributes promotional products. This includes making sure the box is no larger than needed and that you've opted for sustainable packaging.

"This can be a complex process for many companies because shipment packages come in all shapes and sizes," Millburn said. "It takes careful thought and consideration to make sure each client's package is thoughtfully assembled."

1. How Could we leverage technology to drive, measure and improve towards a net-Zero carbon objective, across our transportation network?

### Realize greening the last mile is complicated

By 2030, demand for last-mile deliveries is expected to grow by 78% and emissions from those are expected to grow by more than 30% in 100 cities across the globe, according to a 2020 study by the World Economic Forum.

However, by forming public-private partnerships to create infrastructure improvements, looking for opportunities to improve sustainability as quickly as possible and exploring a variety of strategies, those numbers can change and companies can help bring emissions and costs down significantly.