

# ACCOUNTING in the headlines

## How would using drones or bike messengers to deliver products affect Amazon's cost structure and risk?

Amazon is a huge retailer, but it still struggles to compete against bricks-and-mortar stores when customers want the item "right now." Amazon is currently testing two options to provide one-hour deliveries: drones and bike messengers.

A drone is an aircraft that flies without a human on board. It may be operated via remote control, or it may be self-flying (autonomous). Amazon has been developing delivery drones in the laboratory, but has not yet received permission from the Federal Aviation Administration (FAA) to test the drones outdoors. The FAA is currently working on unmanned aircraft rules and does not anticipate completing its own testing for several years. In the meantime, Amazon is testing drones in a research setting and is considering moving its drone testing research overseas, where it may be able to test the drones outdoors.

Amazon has also been working on testing bike messengers for one-hour deliveries in New York City. During this test phase, Amazon is trying three different bike courier services to be able to pick the fastest and most careful bike delivery service (think no lost or damaged packages.) Bike messengers hang out in a lounge in an Amazon building in Manhattan between deliveries. The lounge has foosball, pool, air-hockey tables, an arcade, and other amenities. When a delivery comes in, the bike messenger is given the address and told to bike there within an allotted time frame. During this test phase, the messengers are not making actual deliveries, but are told to photograph the building at the delivery address and then to return to the Amazon facility in Manhattan. Messengers work eight-hour shifts and are paid \$15 per hour.

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## Questions

1. Is the cost of using UPS, USPS, FedEx, and other delivery services a fixed cost, a variable cost, or a mixed cost? Why?
2. If Amazon starts using drones for deliveries, what costs will it incur related to the drone deliveries? How do each of those costs behave (i.e., are they fixed, variable, mixed, etc.)?
3. If Amazon starts using bike messengers for actual deliveries, what costs will it incur related to the bike messenger deliveries? How do each of those costs behave (i.e., are they fixed, variable, mixed, etc.)?
4. Assume that Amazon switches a significant portion of its deliveries to drones throughout the United States. Given the change in its cost structure, would Amazon have more risk or less risk in times of economic downturn (i.e., sales plummet)? Why?
5. What qualitative factors would Amazon need to consider when deciding whether to use bike messengers for deliveries?