

## UPS installs beacons on package cars to improve loading accuracy

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Preload Smart Scan uses Bluetooth-enabled beacons that communicate with package-scanning devices worn by UPS employees loading packages onto vehicles. The scanners, which read package labels, are programmed to know where a package belongs in a specific vehicle. The beacons, meanwhile, send signals that are unique to certain vehicles and their position within the vehicle. The scanners detect those signals. If a package enters the wrong vehicle, the scanner will notify the loader of the error. Misloaded packages waste time and money and can cause UPS to miss its service commitments. Drivers with misloaded packages on board often have to travel miles out of their way to correct the mistakes. But, in locations where the beacons are installed, UPS already is avoiding miles driven to re-route misloaded packages.

“This is an important step toward improving accuracy in our operation,” said John Doderio, UPS vice president of industrial engineering. “It raises the level of service we provide to our

customers. It also makes us more efficient and generates valuable cost savings.”

Preload Smart Scan is one of dozens of projects under the UPS EDGE (Enhanced Dynamic Global Execution) program, which uses data and technology to enhance operations inside the company’s facilities and on delivery routes. It aids planning and execution and enables better decisions throughout the company’s operations. UPS delivers nearly 20 million packages and documents a day and recognizes that misloads drive inefficiency and potentially create problems for customers who rely on UPS to deliver on time. The company anticipates that Preload Smart Scan will lead to a 70-percent reduction in misloads.

UPS’s beacon application in a package delivery vehicle required a customized high-tech solution. Off-the-shelf beacons were inadequate due to their broad signal range and the close proximity of UPS package cars during morning loading. Beacon signals bled through the sides of package cars, yielding inaccurate information. To solve this technical challenge, UPS worked with a vendor to customize beacons for use on delivery vehicles that are parked very close together. The beacons now have a tighter range, rugged design, longer battery life and can be configured to match the exact dimensions of the package car.

Preload Smart Scan relies on a robust set of telematics solutions that UPS continues to deploy across its global network. The customized beacon technology builds on UPS's innovations in big data and the internet of things. In this case, the data UPS collects on each package helps ensure accurate delivery time estimates. UPS has applied for a patent on the use of beacons in this way. Other companies that pack delivery vehicles in close proximity to one another also may

see the benefits of the technology, as might businesses in different industries that need precise location-based services.

UPS beacons will be in 301 U.S. locations this year, reaching a total of 28% of U.S. facilities and 47% of U.S. package cars. UPS also plans to expand the initiative to facilities internationally.

Source: [UPS](#)

