

# The Advent of Human Free Logistics

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A humanist at heart, I value personal relationships, even those whose interactions are fast and fleeting. However, after a string of recent mishaps with mail and parcel delivery services, I can see how autonomous home delivery may be just the ticket.

Image courtesy: DHL

Oh, and a special shout out to the mailperson last week who waived to me as I was walking to the door to greet him but still left the box on my porch...in a puddle. I have a special robot on order for you.

The concept of autonomous or self-driving vehicles in logistics is not new, but it is now a quickly developing industry. Logistics giant DHL considered the use of autonomous vehicles in their recent [Implication for Logistics](#) article. They considered the present and future in autonomous vehicles for inside logistics, outdoor logistics, line haul transportation, and last mile delivery.

Warehouses and distribution centers, considered inside logistics, already utilize considerable automation and autonomous products. They use automatic stocking and retrieval systems, self-driving fork trucks, and material-handling vehicles guided by wireless signals and lasers. In many warehouses there are less people than machines, with the equipment actually increasing efficiency.

Outdoor logistics, such as ports and transportation centers, are also embracing automated equipment. This sector is in the development stage, but growing. While the items being moved around may be larger and heavier, the technology used in warehouses is being adapted to container ports, where automated cranes pick and deposit containers on trailers ready to be driven to their final destination.

But that line haul trucker with the container may be out of a job in the near future. The seemingly rapid acceptance of self driving vehicles will no doubt spread to the trucking industry sooner rather than later. The chronic driver shortage will intersect with the increasing sophistication of self-driving trucks to automatically deliver freight to a warehouse or distribution center near you. Or perhaps to your home.

On the subject of line-haul transportation, consider the freight carriers on the rails or in the sky. Today's railroad engine is computer guided and works with increasing sophisticated rail management systems. While we can't say that railroads drive themselves, there is only a small crew responsible for hundreds of rail cars at a time.

The same goes for that flight you recently took to San Francisco. The pilot and crew are quite involved in the takeoff, but the actual flight operations and landing are computer controlled. As in the rail scenario, there are less people controlling larger pieces of equipment.

Perhaps the transition driver-less will be called driver-assisted. That may help in the marketing and acceptance of the technology and evolution of delivery methods. Autonomous seems just too scary a term.

Automating the last-mile delivery, to the store, home, or office, will be considerably more challenging. One test is the actual need of the service. While my experience and facetiousness displayed in the opening paragraph was real, I am in not rush for any autonomous vehicle to pull into my driveway to delivery my mail or pick up my dry-cleaning.

Yet, a hybrid autonomous vehicle is close to my house every week. My trash is picked up by one driver using a robotic arm to grab the garbage container and empty it in the truck. In this case the articulated arm is assisting the driver. There is one person in one truck, and not the typical 3-person crew. Additionally, my can is set back where it was picked up. In another couple of years it may be the other way around, where the driver assists the robot. This is yet another example of driver-assisted logistics.

We may chuckle at the idea of drones delivering coffee or bananas directly to our front porch, but drones do have a use. [CyPhy Works](#), a Danvers, MA based robotics manufacturer, calls their drones '*accessible, reliable, and practical robots designed to help real world problems*'. In a recent test flight with UPS, they successfully delivered a small package from the mainland to a small island 3 miles off of the Massachusetts coast. Their cargo was a pharmaceutical and this test demonstrated the ability to get critical shipments to hard to access destination in reasonable and cost effective manner. Perhaps this is the future of the autonomous last mile concept.

It is heartening to see the logistics industry leading the way on the use of autonomous vehicles. This equipment is safe, efficient, and cost effective, and soon coming to a neighborhood near you.

Look at the money we'll save on tips.