

**Testimony of
Scott M. Pauchnik
Sr. State and Local Government Affairs Representative
FedEx Corporation
On HB 595, Personal Delivery Devices
Before the
Maryland House Environment and Transportation Committee
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Good afternoon, Chairman Barve, Vice Chair Stein and members of the committee, my name is Scott Pauchnik and I am the Sr. State and Local Government Affairs Representative for FedEx Corporation in the Mid-Atlantic region. FedEx Operating Companies have more than 60 facilities and employ nearly 6000 residents in the state of Maryland. Some of largest and most state of the art facilities in the FedEx network are located in Hagerstown, Baltimore, Gaithersburg and many other areas across the state.

I am here today to support HB 595 with amendments. FedEx is grateful to Delegate Fraser-Hidalgo for sponsoring this legislation and to the committee for giving us an opportunity to showcase this new and emerging technology.

The legislation before you will pave the way for the next generation of autonomous Personal Delivery Devices (PDDs); demanded by the customer and created to serve businesses and consumers in Maryland safely and efficiently while delivering same day, last mile goods.

The rapid expansion of eCommerce over the last several years has fueled the growth of many industries. The benefits offered by online shopping, such as convenience, more choices, and lower prices, have become more appealing to consumers with the addition of fast delivery.

However, this creates some unique hurdles for our industry and society as a whole. Traffic congestion and pollution are obvious ones. A growing shortage of drivers willing and qualified to spend hours behind the wheel every day dealing with such conditions is another. The so-called 'last-mile' delivery from stores and warehouses to the doors of businesses and consumers is the most complex and costly task in the supply chain, particularly in the diverse urban and suburban environment of vehicles, bicycles, pedestrians, and a growing variety of personal mobility devices.

These challenges have been exacerbated by the COVID-19 pandemic. Now more than ever PDDs are a viable option to deliver goods in a way that reduces human contact all the while offering a new fast and efficient service. The global pandemic has propelled technologies like PDDs to the forefront of the supply chain giving businesses like FedEx the ability to provide last mile delivery in a safe, time-sensitive way.

At FedEx, we recognize that our impact is greater than the services we provide. We are committed to being a great place to work, a thoughtful steward of the environment and a caring citizen in the communities where we live and work. We are passionate about sustainably connecting people and places and improving the quality of life around the world. With this

mission in mind, we have created the FedEx SameDay Bot, Roxo™, a safe and friendly autonomous Personal Delivery Device designed to address some of the above challenges.

FedEx is working alongside major national retailers to determine the needs of different customers with many types of products to deliver. For example, health care workers can transport needed personal protection equipment (PPE) to fellow health care workers within a hospital campus without diverting them away from their job duties – taking care of patients. Auto parts stores often have nearby auto repair shops as their top customers. For them, this technology is an opportunity to quickly deliver needed parts to these auto repair shops, again, without diverting employees from their primary work. Further, a restaurant is looking at the bot as an option for deliveries, such as hot pizza from its restaurants. General merchandise stores are exploring opportunities to deliver items from its stores to customers nearby the same day. And a home improvement store is considering ways to dispatch material to a nearby contractor in need of supplies quickly. These are just a few of many ways Roxo's capabilities can be utilized in the everyday demand and movement of goods.

Safety and sustainability are the overarching considerations of Roxo's design. It is built on the iBot wheelchair base engineered by DEKA Research and Development Corporation, with over 10 million hours of error-free operation. Here are some of Roxo's key features:

- Roxo is a zero-emission, battery-powered Personal Delivery Device.
- Roxo is capable of traveling at variable speeds within approved speed limits.
- Roxo possesses a sophisticated set of pedestrian safe technologies from the iBot base, plus a network of sensors and cameras that provide 360-degree vision for complete awareness of its surroundings.
- It also utilizes advanced 'machine learning' algorithms to detect and avoid obstacles, plot a safe path, and follow all applicable road and safety rules.
- Roxo features have been developed specifically to communicate with those it encounters on the street. e.g. turn signals, lights and a signaling screen to clearly signal its intentions to pedestrians, cyclists and vehicles around it.
- Roxo is designed with a taller profile for pedestrian and driver visibility.
- Proprietary technology makes the Roxo highly stable, allowing it to negotiate curbs, unpaved surfaces, and even steps for a door-to-door delivery experience.
- Roxo is remotely monitored at all times. When the Bot doesn't know what to do, it stops, calls for assistance and a teleoperator takes over.

PDDs like Roxo will complement and supplement our existing workforce while safeguarding the health, safety and welfare of all Marylanders. Roxo will allow us to serve a new market with our FedEx On Demand service, and it does not replace any of our current delivery services or solutions. This service will also create new jobs in remote operations monitoring, customer support and local maintenance.

As I mentioned, the surge in e-commerce during the pandemic has resulted in peak-like levels of package volume for FedEx. Since March 2020, to ensure customers continue to receive outstanding service throughout this challenging period, FedEx has hired tens of thousands of package handlers, contracted with thousands of service providers and has onboarded thousands

of drivers in targeted markets. With e-commerce and freight volumes expected to continue to grow in the coming years, and industry driver shortages estimated as high as 60,000 due to driver retirements and recruitment challenges, PDDs offer a sustainable solution to increase the efficiency of short-range, on-demand, business-to-consumer deliveries in urban areas and residential neighborhoods.

To date, the states of Arizona, Florida, Idaho, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin have enacted statutes allowing for the deployment and regulation of PDDs. Also, there are an additional 8 states considering PDD legislation during their 2021 sessions. It is our hope that Maryland continues its proven track record of welcoming the development and application of new technologies within the state by considering HB 595.

As I said earlier, FedEx supports HB 595 with amendments. We are asking this committee to consider increasing the allowable weight for a Personal Delivery Device and to increase the speed on sidewalks to 10mph. Roxo stands nearly 4 and half feet tall and is equipped to carry up to 100lbs of payload. Unlike some of the smaller sidewalk robots, Roxo's relatively tall profile makes it easily visible at eye level to pedestrians, bicyclists and motorists. Current weight restrictions prohibit Roxo from operating in the State of Maryland and speed restrictions hinder the safety and efficiency of Roxo. The weight restriction must be omitted for Roxo to operate in Maryland. Please consider amending HB 595 to include Roxo. Thank you for your time and attention.