

**A world-first in Dublin as UPS and Dublin City Council innovate to reinvent sustainable last mile deliveries**

An innovative walking and cycle based system designed to optimise deliveries in city centres has launched in Dublin. Operating out of mini urban distribution centres and combining powered eWalkers and eQuad cycles, this model allows for last mile deliveries that don't add to local emissions or congestion, enabling a step change in the way goods are delivered in busy urban locations.

Funded by Dublin City Council, Enterprise Ireland and Belfast City Council, the unique solution was developed as part of a Small Business Innovation Research (SBIR) challenge that sought new approaches to optimising deliveries. Participating in the challenge enabled Fernhay, an innovative design and manufacturing consultancy, to develop the new zero emissions delivery solutions for global logistics carrier, UPS, to trial.

The eWalker and eQuad operate from "urban package eco hubs" that UPS has introduced around the city. The eco-hubs take in larger consignments of deliveries and redistribute them to walkers and cyclers using removable Cube containers. There are already two of these mini distribution centres up and running in Dublin which has facilitated the removal of five diesel vehicles from the road, reducing carbon emissions by up to 45%.

Speaking at the launch, Owen Keegan, Dublin City Council Chief Executive, said: "collaboration is key to tackling the challenges facing our city right now so we are very happy to see our Transportation Department and Smart City programme working with innovative partners such as Fernhay and UPS to address last mile deliveries. This solution helps the city adapt to the Covid-19 situation by enabling foot and bike deliveries and discouraging the return of congestion."

"It is really exciting to be piloting this in Dublin –the first city to test the Fernhay eWalker. As cities reopen for business after the Covid-19 shutdowns, those looking for ways to keep goods moving while minimising the return of congestion and pollution, should take note." – said Frances Fernandes, Director, Fernhay.

She explained: "Fernhay's eWalker and eQuad are part of a wider system that enable key workers to deliver groceries, medicine and parcels without the use of vans. Cities are facing huge change to respond to 'social distancing' with pavements widened outside shops and roads narrowed to make more space for walking and cycling. Our system offers a clean and viable option and rethinks how cities can support last mile deliveries now and in the future."

UPS International Sustainability Director, Peter Harris, said: "This is about reimagining last mile logistics. Cities need solutions that eliminate emissions and congestion and this system achieves that. But it goes further. The ability to load the box that the eWalker and the eQuad carry anywhere within our network will help UPS operate more efficiently. Taking this concept of removable containers, long since practiced in long

haul freight, into the urban environment is a game changer and furthers UPS's long-standing commitment to bring its customers sustainable solutions."

Finally, Tom Kelly, Head of Innovation, Enterprise Ireland, said: "We are happy to support this challenge which delivers benefits both for Dublin citizens and the innovative technology companies that are helping the City Council address the issue and public impacts of last mile delivery. The SBIR programme is unique in providing public sector bodies and innovative companies the opportunity to work together to develop innovative solutions to big problems, such as optimising deliveries in cities".

The UPS/ Fernhay partnership won SBIR support because it encourages safer, cleaner, more pedestrian friendly urban environments, and for its potential replicability in other contexts. As pressure mounts to ditch diesel and switch to sustainable, this dynamic consolidation and redistribution model is already contributing to emerging conversations on urban mobility and liveable cities. Other carriers have registered interest in operating similar systems in Dublin, and Belfast are assessing learnings from the initiative for potential applicability there. Last mile deliveries may never be the same again.

## **Ends**

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### **Notes to the Editor:**

Urban freight deliveries are traditionally made by diesel commercial vehicles which add to traffic levels while damaging air quality. The current trend toward increased online shopping is exacerbating these impacts by amplifying the volume of deliveries. Concern around public health, urban quality of life, and climate change is driving urban policymakers to reappraise how deliveries are managed. The Last Mile Delivery SBIR is a challenge supported by Smart Dublin and led by Dublin City Council, Enterprise Ireland and Belfast City Council, which invited companies to propose technology-enabled solutions to optimise deliveries and improve emissions and congestion in urban environments with a total budget of over 200k in place to accelerate innovation. This SBIR challenge launched in 2018 as part of the wider Smart Dublin innovation programme. Phase 2, with four participating projects, concludes in late 2020.

**Small Business Innovation Research (SBIR)** is a pre commercial procurement initiative supported by Enterprise Ireland (EI). The aim of SBIR is to drive innovation across all sections of the Irish Public Sector. EI provide match funding for projects which address public sector challenges via robust engagement with technology rich companies and organisations.

**Fernhay eWalker:** The Fernhay eWalker moves parcels on foot and provides a workable solution to last mile deliveries in pedestrian friendly areas and where road space is very limited. The eWalker fits these new environments due to its slim design, low height and ease of movement. We are unaware of any similar trial, worldwide, using eWalkers as part of a commercial courier urban consolidation and delivery system.

**Fernhay eQuad:** Fernhay's engineers have made the innovative eQuad (four-wheeled e-assist cycle), which can be used to pick-up and deliver packages from Dublin's 'urban package eco hubs'. The 4 wheel configuration allows for a narrower product ensuring it glides more easily through congested spaces including city cycle lanes and roads than alternatives, such as a 3 wheeled trike.

**Fernhay Cube container:** The Cube container is loaded full of parcels and is designed to switch easily between transport types (e.g. depot, hub, eWalker and eQuad) and to one day enable pre-sorting of packages for delivery at source.

The Fernhay eQuad and eWalker are part of a wider containerisation model which includes a Transfer Trailer that transports multiple mechanised containers from a delivery depot to the city centre for last mile delivery between different transport modes.

Links:

[www.smartdublin.ie /](http://www.smartdublin.ie/)

<https://fernhay.com/>

<https://www.ups.com/ie/en/Home.page>

<https://www.enterprise-ireland.com/en/Research-Innovation/SBIR-Ireland/>