

SMARTPHONE ENABLED PEDESTRIAN CROSSINGS TO ASSIST THE VISUAL IMPAIRED



Images courtesy of Neatebox

Delivery Partners:

City of Edinburgh Council, Neatebox

BACKGROUND

Neatebox is an inclusive solutions led company, working with proximity aware technology, which focuses on creating and providing products that improve the quality of life for specific users but which ultimately aim to provide and support an inclusive society.

Through his work with Guide Dogs for the Blind UK, Gavin Neate, CEO of Neatebox, has become increasingly aware of the accessibility being built in as standard to modern smart devices and began to see the need for smart technology to increase the development of inclusive solutions.

Neatebox have used their knowledge of visual impairment and routine experience of unsafe and poorly installed pedestrian crossings to design a system by which the blind, visually impaired and pedestrians living with reduced mobility could interact with the environment around them simply using their smartphone and the Bluetooth Low Energy (BLE) functionality within.

The user runs the free Neatebox Pedestrian Crossing application and once they come into close proximity with a pedestrian crossing box fitted with Neatebox BLE technology, the button is either pressed on the phone, or it can be set to press the button automatically within a certain time frame to allow the crosser to get ready. This removes anxiety and limitations on users and is not limited to those with impairments as it can also be used by anyone who has their hands full!

The app also gathers a lot of data on how people move around a city which is collected and can be analysed. This contributes to the goals of Smart Cities, MaaS and future planning for cities and towns.

FIRST USE

The first active test site was on Holyrood Road in central Edinburgh.

APPLICATION

Since their first installation, Neatebox have created two more test sites. In partnership with Lothian Health Board, there have been four installations on Lauriston Place in Edinburgh, chosen due to its proximity to the Princess Alexandra Eye Pavilion. The technology is also incorporated on the privately owned pedestrian crossing at the RBS Head Office in Edinburgh. This is the first private installation of its type in the world and can also be pressed using a smart watch.

Neatebox has carried out extensive user testing with a wide variety of disabled users at their trial sites and are fine tuning the development of the product and application so that their technology can become part of the industry standard for pedestrian crossings, which will be ready for summer 2017.



BENEFITS

Maintaining an active life improves the social, commercial and physical mobility of those in society who have permanent or temporary challenges in this area - this also reduces the pressure on the health system by encouraging motivation and addressing loneliness which can positively affect potential triggers for mental illness. As the ageing population figures are set to double by the year 2050, and this will increase the figures of those with a disability, it is future proofing for our smart cities.

The technology has the benefits to be either retrofitted into existing pedestrian crossings or become part of the manufacturing process for any new installations. With around 300,000 pedestrian push buttons in the UK, Neatebox is looking to increase production and see the technology rolled out across the country to the benefit of a wide range of users.

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