The e-bikes used in this project look similar to normal bicycles but have a small electric motor (powered by a rechargeable battery) that can be switched on to assist the rider. The amount of support from the motor reduces with increasing speed, and cuts out altogether once the bike reaches 25kmph, or if the rider stops pedalling.

Who might want to use one?
E-bikes might encourage more people to cycle - or encourage people to cycle more. They make it easier to cycle uphill, against the wind, with heavy loads (children, shopping) or for longer journeys. They also have benefits for commuters who want to arrive unruled, older age groups, people with physical limitations, tourists and last mile delivery of goods.

Is e-cycling healthy and active?
"The bikes require the rider to pedal at all times and they are likely to provide at least moderate levels of physical activity for most people" explains Nanette Mutrie, Professor of Physical Activity for Health at the University of Edinburgh. She is on the project’s Advisory Panel and adds: "Use of such bikes will therefore be of potential health benefit to all those who need to increase their levels of physical activity and who use them in preference to undertaking less active types of travel or activity."

How was the research data collected?
Surveys were undertaken at two large workplaces in Brighton about travel habits and interest in electrically-assisted bikes. Subsequently, 80 commuters were loaned bikes for 6-8 week periods. Interest in e-bikes was also assessed through public events, a community-based trial, and through review of the international literature. A smart monitoring system was installed on the trial fleet of 35 e-bikes to collect usage data in real time.

Key findings? They are on the front of this brochure.

What are the Policy Implications?
• Finding ways to reduce the (initial) costs of using an e-bike, such as hire schemes, or purchase discounts, or increasing the cycle-to-work tax break, would all help to increase use of this mode, together with mechanisms to enable people to trial e-bikes before committing to use.

  • Integrating new modes of transport such as e-cycling with smart technologies such as the Internet of Things extends their appeal to some users and can contribute to data collection for smart cities.

  • Compared with electric cars, e-bikes may represent a more cost-effective option, with a better chance of making a major difference to travel habits, while also increasing health and wellbeing.
E-bikes may help to increase the initial appeal of cycling to those less likely to cycle including women, older age groups, non-white ethnic groups, those who are currently relatively inactive, car owners and users and those living 3–10 miles from work.

In the commuter trial, 75% of those who borrowed e-bikes reported that they typically used them at least once a week and car miles driven dropped by about 20% during the trial, averaged across all participants.

Other European countries have had very successful programmes to encourage e-bike take-up and use.