

University of Birmingham wins First of a Kind funding for hydrogen-fuelled train

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The first mainline testing of a hydrogen-fuelled train in the UK is one of two dozen successful projects being funded by the Department for Transport's £7.8M First of a Kind (FOAK) competition.

The HydroFLEX Project is a groundbreaking partnership between the Birmingham Centre for Railway Research and Education and railway rolling stock company, Porterbrook. Its aim is to demonstrate how hydrogen could be deployed across the rail network to offer a cleaner alternative to current diesel trains. A full-scale prototype of the HydroFLEX train will be launched at Rail Live next week (19/20 June) at Quinton Rail Technology Centre, Warwickshire.

Run by Innovate UK and funded by the DfT to support research, development and innovation in the UK rail industry, the FOAK competition seeks ideas that can be adapted to transform rail travel. Each of the winning schemes will receive between £250,000 and £350,000.

Rail Minister Andrew Jones said: “The First of a Kind competition has consistently produced truly innovative projects developed for the benefit of passengers, helping to drive forward a greener, cleaner and more efficient rail network.

“This round has been the biggest yet and I am excited to see how our funding will bring these ambitious ideas to fruition.

“This government is also investing £48 billion to modernise our rail network over the next five years, ensuring people have the safe, frequent and punctual journeys they deserve.”

Alex Burrows, Director of the Birmingham Centre for Railway Research and Education, said: “The partnership between the University of Birmingham and Porterbrook has been a trailblazer for academia and industry accelerating ideas into practical application on the railway. We look forward to the next phase of this project which will take this technology onto the UK railway.”

Other successful projects funded in the FOAK competition included 4Silence’s plan to develop a noise-reducing wall that works by diffracting sound waves from passing trains upwards. This makes it as effective as a barrier three times its height.

Another scheme being supported is Amey VTOL’s development of a drone system that could carry out track inspections from the skies. This would avoid the need for people to set foot on railway infrastructure.

Simon Edmonds, Deputy Executive Chair and Chief Business Officer, Innovate UK said: “The UK’s rail network delivers significant economic benefits to the nation, providing an environmentally-friendly transport system for the movement of both passengers and freight. Yet there is more we can do to boost the reliability of the network, to make it more attractive to freight users, and to make it even greener.

“The pioneering projects for which we have announced funding today can increase reliability, to keep services running, with real benefits to freight operators and the environment. The programme will also help innovative companies succeed, both here and in export markets.”

The first round of First of a Kind was launched in 2017 and saw ten projects win a share of £3.5m to develop ideas to improve passenger experience and demonstrate tomorrow’s trains.

The second round focussed on schemes aimed at cutting the carbon footprint on the UK’s railways, and enhancing stations for passengers. These saw another ten projects offered a share of £3.5m.