

Brand new rail tech to 'pandemic proof' train travel

- new tech to encourage passengers back to the railway post-COVID-19 has received government backing as part of the First of a Kind competition
- a 360-degree immersive journey planning app, interchangeable train interiors and an app connecting passengers to the world outside their train
- 30 projects to share £9 million investment to launch tech to improve rail journeys, increase passenger confidence and make the network even greener

A virtual reality immersive journey planning app for trains and stations could soon make journeys easier by reducing passenger anxiety and helping passengers to understand their journey ahead of travelling.

The technology is one of the [winners of the latest round of the First of a Kind \(FOAK\) competition](#) announced today (2 July 2021) by the Transport Secretary. This year, the competition has been aimed at making the railways cleaner, greener and more passenger-friendly.

The Department for Transport (DfT), in partnership with [Innovate UK](#), has funded 30 ground-breaking projects with a share of £9 million.

The competition is focused on developing pioneering technology and exceptional ideas that can improve journeys for travellers, encourage passengers back onto the network and reduce the environmental impacts of rail as we build back better from COVID-19.

Transport Secretary, Grant Shapps, said:

I am delighted to announce the winners of the 2021 First of a Kind competition. These winners will hopefully play a role in putting passengers at the centre of our railways as we build back better from COVID-19.

The competition always throws up surprises and the ideas shown today could transform how we travel in future.

The creative problem solving on display in this competition will be further encouraged by the reforms brought about by the [Williams-Shapps Plan for Rail](#).

The expertise and innovation of the private sector will improve efficiency, making it easier and cheaper to plan maintenance, renewals and upgrades – unlocking new benefits for passengers.

Winners include a revolutionary app that connects rail travellers to the world outside their window and brings the route to life. As passengers

travel, the app uses geo-location to immerse them in the history and stories of the places they travel through, making even the morning commute a train ride back in time.

Other winning projects include:

- a system to monitor people flow, congestion points and behaviour at stations, so operators can remove bottlenecks and deploy countermeasures, helping people avoid crowds and restoring passenger confidence in the rail system post COVID-19
- a scheme that provides an interchangeable interior train carriage for quick, deep cleaning and allows operators to rejig a train's seating layout at short notice – reacting to demand, keeping passengers safe and freeing up space
- a project that uses electromagnetism to deliver safe and predictable braking in harsh conditions, while improving acceleration
- a scheme that aims to deliver a train running on hydrogen and a hydrogen gas blend promising low emissions and an even greener railway

Simon Edmonds, Deputy Executive Chair and Chief Business Officer, Innovate UK, said:

As we move ever closer to getting past the pandemic, passengers are returning to the railway. To give them ever greater confidence that rail is safe and sustainable, we called upon UK innovators to come up with fresh ideas.

Yet again the response has been fantastic. Not only will passengers benefit from these great innovations, but business prospects are bright in this sector too.

Now in its fifth round, the competition was open to inventors from across the nation, regardless of the organisation's size or stature, which allows small companies with bright ideas to be recognised.

Previous winners include the LoCe (Less oil, Cleaner exhaust) project that secured £398,000 in 2020. The project has developed new diesel exhaust technology that reduces nitrogen oxide emissions by around 80%. The technology has been fitted to a Porterbrook-owned Class 170 Turbostar, operated by East Midlands Railway, and has subsequently reduced harmful engine emissions.