

West Coast Partnership announce research collaboration with the University of Leeds

December 2, 2020



West Coast Partnership to invest £1m plus as part of The University of Leeds' plans for The Institute for High Speed Rail and System Integration, to drive High Speed rail advancements.

- £1 million plus investment to drive High Speed rail advancements
- Partnership will help deliver a UK centre of excellence for rail engineering in the Leeds City Region.
- Move intended to drive improved customer experience and operation of HS2

West Coast Partnership (WCP) has announced a research tie-in with the University of Leeds with an investment worth more than £1 million to deliver advancements in High Speed Rail.

The university and WCP will also collaborate on the launch of The Institute for High Speed Rail and System Integration.

When fully operational, the Institute will be capable of simulating the conditions found on busy rail networks, the findings of which will play a key part in the shaping of HS2 services.

The research will focus on:

- Automatic Train Operation and European Train Control System – technologies, which include signalling, to keep trains operating safely.
- Passenger movement on trains and in stations.
- Full scale testing of rolling stock and their system integration.
- Driver training and simulation
- Passenger experience

Caroline Donaldson, Managing Director at West Coast Partnership Development, said: “We are at the start of a huge technological revolution on the West Coast Main Line, in addition to HS2 which will transform services between the nation’s biggest cities.

“We couldn’t be more excited to be partnering with the Institute for High-Speed Rail and System Integration. Their highly-skilled research engineers and scientists will be key to ensuring we make the very most of the very latest leading edge technology to drive a real step change in high speed rail operations.”

The cutting-edge facilities at the Institute for High-Speed Rail and System Integration include:

- A specially designed vehicle testing rig – in effect, a rolling track that can test trains and carriages at speeds up to 250 mph. Using a tilting platform, it will be able to simulate bends, ascents and descents.
- An infrastructure testing facility that will be able to re-create the enormous forces that are generated on tracks, ballast and embankments by conventional and high-speed trains. It will allow engineers to significantly cut the time it takes to design and test new track and support structures.
- A system-integration laboratory that will measure how well different railway technologies – power, track, signals and customer information services – operate as an integrated whole to reduce delays.

The Institute’s director, Professor Peter Woodward, said: “The Institute was designed to speed up the time it takes to get new innovative ideas introduced to the railway – and to ensure that when they are brought into service, they work as intended.

“Our founding philosophy is to work closely with the rail industry, and I am excited that we are forming a research partnership with a partnership that will be shaping the UK rail industry for decades to come.”

Work has started on building the Institute for High-Speed Rail and System Integration on a site next to the Leeds Enterprise Zone, on the south eastern edge of the city. The Institute will form a key part of a wider strategy involving Leeds City Council and West Yorkshire Combined Authority/ Leeds City Region Enterprise Partnership to develop a UK centre of excellence for rail engineering in the Leeds City Region.

Photo credit: West Coast Partnership