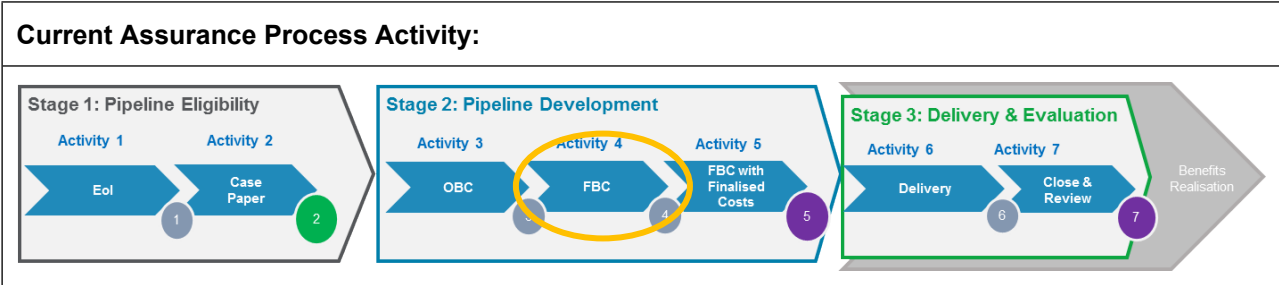


Scheme Summary

Name of Scheme:	Institute for High Speed Railways and System Integration (IHSRSI)
PMO Scheme Code:	UNI-Leeds-001
Lead Organisation:	University of Leeds
Senior Responsible Officer:	Professor Peter Woodward
Lead Promoter Contact:	Professor Peter Woodward
Case Officer:	Lisa Childs
Applicable Funding Stream(s) – Grant or Loan:	Over programming against the Local Growth Fund
Growth Fund Priority Area (if applicable):	Priority 1: Growing Business/ Priority 2: Skilled People, better jobs / Priority 3: Clean energy, environmental resilience. / Priority 4: Infrastructure for growth.
Approvals to Date:	Case Paper approved (decision point 2) 28 th June 2018 by Combined Authority
Forecasted Full Approval Date (Decision Point 5):	Decision point 5 due December 2019. The scheme may be delivered in 2 parts with separate approvals required at the next stage. (Final costs will be available as follows: Infrastructure Test Facility and Vehicle Test Facility equipment, April 2019; Infrastructure Test Facility civils and infrastructure July 2019; and Vehicle Test Facility civils, January 2020.)
Forecasted Completion Date (Decision Point 6):	December 2020
Total Scheme Cost (£):	£26.093 million
Combined Authority Funding (£):	£13.047 million Growth Deal (Indicative approval at decision point 2 was £11.44 million)
Total other public sector investment (£):	
Total other private sector investment (£):	£13.047 million University of Leeds match funding
Is this a standalone Project?	No. The IHSRSI represents a substantial component of the University's planned new Technology Park, which is itself part of a much wider Project for development in the East Leeds Enterprise Zone via an Advanced Manufacturing Park (AMP). This project represents phase 1 of IHSRSI, with phase 2 focusing on improved systems integration and

	the creation of an innovation centre (the subject of separate funding bids).
Is this a Programme?	No
Is this Project part of an agreed Programme?	No



Scheme Description:

The **Institute for High Speed Railways and System Integration (IHSRSI)** is a University of Leeds-led £60m development to be located on the University's new Leeds Technology Campus (LETeC) a 9.9-acre site to the east of Leeds sitting within the Leeds Gateway Enterprise Zone and future home to the High Speed 2 (HS2) train depot and also an Advanced Manufacturing Park (AMP), for which Leeds City Council regards the IHSRSI as a catalyst. Clustering on this scale has the potential to yield significant economic benefits to the City Region.

A suite of three state-of-the-art test facilities, the IHSRSI is designed to support a novel **whole systems approach** to next generation high-speed rail encompassing civil, mechanical, electrical and digital engineering design, passenger experience, cost-benefit analysis and policy. Enabling collaboration with industry on advanced Research & Development, prototype and new product testing, and development of higher-level skills, this integrated and holistic approach will facilitate a de-risking of the substantial investment about to be made in high-speed rail.

The bid to Combined Authority for funding relates to phase 1 of the development and specifically to the construction of 2 of the test facilities namely:

- Infrastructure Test Facility (ITF) – a full-scale 400 km/h capable high-speed rail infrastructure systems test facility that will be able to test full-scale railway track structures, including embankments, preformed systems and ground stabilisation technologies. This outdoor facility is adjacent to the Vehicle Test Facility
- Vehicle Test Facility (VTF) – a full-scale high-speed 400 km/h capable vehicle systems test facility capable of testing full-scale rolling stock and their interaction (behaviour) with different track systems. Housed in a building, this facility will in future accept rolling stock driven directly from the rail network.

Business Case Summary:**Strategic Case**

The strategic case for this project is very strong and has attracted letters of support from a wide range of business, academic and local government leaders.

Key strategic drivers are:-

- The development of High Speed Rail due to population growth.
- The growing size of rail supply chain economy
- The increasing performance requirements of High Speed trains, including the requirement for new infrastructure and test facilities.
- The pressure to de-carbonise transport and freight, and the subsequent innovation of new technology.
- Potential future resources in modular manufacturing.

The UK currently has no access to R&D test facilities. This project would fill that gap and create a nationally unique, and globally significant facility and act as a catalyst for cluster development in advanced manufacturing within the East Leeds enterprise zone. The facility will also be complimentary to the co-location of the HS2 depot which is also planned to locate within the same Enterprise Zone.

Commercial Case

The global railway sector is going through a period of change and substantial growth. Current estimates of the value of the rail market are in the region of £128 billion and a growth of 2.7%. This investment will allow the city region to tap into this market and create a driver for economic growth.

The UK is set to see the greatest investment in the railways since the Victorian era with new projects in the pipeline worth more than £100 billion. The UK's train fleet is forecast to grow by 89% over the next 28 years and between 11-16,000 new electric vehicles are expected to be added to the network.

The lack of suitable R&D and test facilities could cause delays and disruption in getting new rolling stock into service. The IHSRSI's test bed capability will help address this issues. It will also provide a mechanism for testing new rolling stock without causing delays to the existing network.

Economic Case

Site allocation and nature of facility options testing has been carried out by the Universities experienced projects team and their professional advisors. Details are supplied in the business case.

The investment in phase 1 of the IHSRSI will directly contribute:-

- 8.75 FTE jobs creation.
- 1,063m² of commercial floor space constructed in the VTF (building)
- 2,292m² of commercial floor space constructed in the ITF (external test facility)

In addition to these direct outputs will be indirect contributions through both phase 1 and phase 2 of the IHSRSI of:-

- Jobs created within the IHSRSI and supply chain
- Businesses assisted- businesses receiving advice from the facility to improve performance.
- Businesses receiving grant funding – securing innovation grants to deliver IHSRSI projects.
- Learning opportunities – postgraduate, undergraduate and CPD programmes.

<p>Financial Case</p>	<p>The total project cost is £26.043 million of which 50% is being provided by the Leeds University, and 50% is to be the capital contribution from the combined authority growth deal budget.</p> <p>The financial breakdown is:-</p> <ul style="list-style-type: none"> • Project development £1.339 million • Land assembly £1.855 million • Enabling works £1.855 million • Delivery / construction £18.964 million • Contingency £2.030 million • Independent impact evaluation £0.050m • Total £26.093 million <p>The future revenue costs will be funded from the operating income generated, research income, industry income and tuition fee income.</p> <p>State Aid advice is being sought and will be available for imminently.</p>
<p>Management Case</p>	<p>The delivery of IHSRSI is being managed as part of Leeds University's Leeds Engineering Technology Campus (LETeC) development. Dedicated project staff are being assigned to this scheme from the University Estates Department. External Professional and consultancy advice had been procured. Governance of the project is to be via the LETeC programme board, though a recommendation could be made that a separate project board be set up with attendance from the Combined Authority.</p> <p>Project roles:</p> <ul style="list-style-type: none"> • University of Leeds – Client • Turner & Townsend – External Project Manager • Atkins – Architect and M&E consultant • Curtins – Civil and Structural Engineers • Arcadis – Cost Managers