LEEDS CITY REGION ENTERPRISE PARTNERSHIP

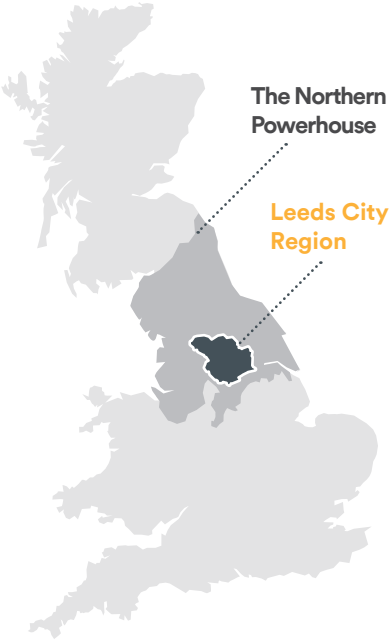
Working in partnership with the West Yorkshire Combined Authority

Leeds City Region

Showcasing the rail opportunity

Welcome to the largest city region outside London

Leeds City Region is a £66.5 billion economy, larger than nine EU countries and the largest in England outside London and the South East.



Critical mass, specialist tasks

Across the region over 144,000 people work in the manufacturing sector, of which 48,500 are employed in advanced manufacturing (BRES 2015). Key rail related specialisms include castings, fabrication, precision machining, hydraulics, gear systems, technical textiles, compressors/ pumps, bearings, drive systems, machine tools, control systems, seals, electronics and couplings.

Business

The region is home to 7,300 manufacturing businesses with a sales turnover of over £25 billion. Centre for Cities reported that Leeds had the fastest growing private sector jobs growth in the UK in 2016, with over 6 per cent annual growth.

"The availability of an extensive and high quality supply chain, access to some of the best rail industry related research assets in the UK and unparalleled links to the UK transport networks, I believe, places Leeds City Region as the ideal location in the UK for rolling stock assembly"

Professor Peter Woodward, Chair - Institute for High Speed Rail and Systems Integration, University of Leeds

A city region with ambition

Developing our businesses and supply chain

- Position the City Region as the UK centre for high speed rail engineering
- Build on the capabilities of the University of Leeds Institute for High Speed Rail and System Integration by creating a technology park to locate transport technology spinouts and inward investors, linking with the University of Huddersfield's Institute of Railway Research
- Increase awareness of the opportunities HS2 will bring
- Support our innovators and entrepreneurs to develop new and exciting products in rail engineering
- Develop the cluster of railway engineering expertise in York

Leeds City Region, an emerging high speed rail cluster

As a region we are committed to supporting the development of a world class high speed rail innovation and supply chain cluster.
The co-location of the HS2 Rail Supply Depot and the IHSRSI on the Leeds City Region Enterprise Zone is already attracting the attention of UK and overseas based rail companies.

To facilitate the development of this emerging cluster we are developing proposals to create the UK's first 'Advanced Rail Technology Park'.

"'HS2 is delighted that the University of Leeds is launching the UK's first institute dedicated to high speed rail and system integration. The creation of world-leading facilities so close to the HS2 depot to the east of Leeds will accelerate the vehicle and systems integration testing process, and advance the UK's vision of creating a high speed railway that will support regional growth, create jobs and rebalance the economy."

Iain Roche,
Head of Innovation for HS2

Rail industry cluster in Leeds City Region and surrounding areas

DURHAM/TEES VALLEY

Train operators
Cross Country Trains

Rail industry assets
Teeside University
Durham University
Darlington College

Rolling stock manufacturers
Hitachi Rail Europe

Supply chain
AMEC
Clancy Docwra
Dyer Engineering
Elite Composite Products
Henry Williams
Hydram
Romag
Sabre
Stephenson Gobin
Stig Fasteners
Tornado Steam Traction

LEEDS CITY REGION

Rail strategy organisations
West Yorkshire Combined Authority
Transport for the North

Rail industry assets
University of Huddersfield
- Institute of Railway Research
- Centre for Innovation in Rail
- Rolling Stock Innovation Centre

University of Leeds
- Institute for High Speed Rail and Systems Integration
- Institute for Transport Studies

Supply chain
ABG Geosynthetic Engineering
AEDAS
Aflex Hose
AJ Hainsworths
Anglia Metals
Aquarius Rail
Archway Engineering
AUS Ltd
BAM Construction
Billington
Camira Fabrics
CCL Stressing Systems
Cirteq
DB Santasalo
Edison & Wanless
EJOT UK
Eurofins
Giffen Group
Gilchrist Engineering
Hewlett Rail Ltd
Hindle Group
Instrumentel
Kloeckner
Koyo Bearings
LPA Excil
Mabey
Naylor Industries
Parker Hannifin
Paul Mullinder Engineering
Pickersgill Kaye
Premier Farnell
Qualter Hall & Co
Rosehill Polymers
RTS Infrastructure
Siemens Mechanical Drives
TMD Friction
Touchstar
Tracsis
Trimble Tekla
Von Roll
White Young Green
William Cook
WSP Rail

Consultants
Central Alliance
Mott MacDonald
Turner & Townsend

YORK

Rail industry organisations
Historical Railways Estate
Network Rail East Coast

Train operators
Alliance Rail Holdings
Direct Rail Services (freight)
First Transpennine Group
Grand Central
LNER
Northern Rail

Rail industry assets
Rail Operating Centre and Training Centre
Siemens Rail Maintenance Depot

Consultants
AECOM
Arup
First Class Partnership
Hyder Consultancy
Mott MacDonald
URS Scott Wilson

Supply chain
Amey Rail
Atkins Rail
Babcock Rail
BWA Rail
DGM Coachbuilders
Incremental Solutions
JSD Rail
Keir
Omnicom Engineering
Portastore
Signalling Solutions
Tata
Trapeze Group
Unipart Rail
Volker Rail Signalling
York EMC Services

GOOLE

Proposed location of Siemens Rail rolling stock assembly facility

DONCASTER/SHEFFIELD

Train operators
DB Cargo
GB Railfreight

Rail industry assets
Doncaster College
Doncaster International Railport
National College for High Speed Rail

Supply chain
Agemaspark
Birley Manufacturing
Colas Rail
EM Diesel
Hird Rail
Invertec
Mayflower Engineering
Newburgh Precision
Polydon
SCG
SPL Powerlines
Wabtec Rail
Trackwork
Trough Tec
Volker Rail Group

A city region of innovation

University of Huddersfield

Institute of Railway Research (IRR)

Led by Professor Simon Iwnicki, the IRR is a world leading centre of railway engineering research. With 35 researchers the institute has helped to improve the knowledge of the way in which railway vehicles interact with the track, including key performance aspects such as:

- Suspension performance
- Wheel rail contact
- Traction and braking

The institute is also working on vehicle/track interaction for a number of high speed rail vehicle concepts, having won a UK government contract to model HS2 design and performance.

The IRR is home to a full scale Pantograph dynamic test rig with Hardware in the Loop (HIL) facility which is unique in Europe and will also accommodate a large scale cross section wind tunnel which will allow the evaluation of aerodynamic forces.

Centre for Innovation in Rail (CIR)

The CIR has built upon the worldclass research and development capabilities of the IRR to support the rail industry supply chain in bringing new technologies to the rail sector.

The CIR works together with its key industry partners: Unipart Rail, Omnicom Engineering, RSSB and NSAR to offer specialist technology and business services, funding opportunities and routes to market for developed concepts.

The centre also provides expertise in operational, service and innovation management, business case development and wider disciplines including marketing, and supply chain management.

The Rolling Stock Innovation Centre

The £30 million Rolling Stock Innovation Centre aims to meet the current and future R&D demands of the UK Rail industry to support the next generation of railway vehicles and will include an extended range of full-scale advanced test rigs to accelerate the adoption of new technology for the next generation of rolling stock.

The primary task is to develop the new generation of rolling stock that lasts longer, is more energy efficient and is less costly to maintain.

A city region of innovation

University of Leeds

Institute for High Speed Rail and System Integration (IHSRSI)

Led by Professor Peter Woodward, Chair in High Speed Rail Engineering at the University of Leeds, the IHSRSI is the UK's first dedicated centre for high speed rail technologies and system integration and aims to optimise the efficiency, performance and safety of high speed rail.

The Institute will house a 400 km/h high speed rail vehicle system test facility offering an unrivalled centre of excellence for high speed rail planning, design, construction and manufacturing.

The institute has a focus on:

- Design, manufacturing and construction (Infrastructure and rolling stock)
- Full-scale testing of track and train dynamics under extreme stress and speed to optimise design and assess performance of new technologies and materials
- Developing new technologies, such as low cost titanium, and the impact of rolling stock components and new traction systems
- System monitoring maintenance and control
- Expertise of modelling, robotics and control systems to contribute to new infrastructure (civil and digital) and train designs
- Advancing remote, wireless and intelligent sensing and data analysis, to ensure digital infrastructure is linked to digitally enabled rolling stock and provide the potential for real time control on new and existing networks
- Digital engineering
- Power delivery and power economics
- Improving pantograph-catenary dynamics and alternative power pickup systems ensuring sufficient power to trains travelling at high speed
- Train-track interaction
- Ensuring high speed train-track interaction optimised for safety and comfort, with trains that are highly efficient yet low maintenance

Institute for Transport Studies (ITS)

ITS is a leading international centre for transport research. It is particularly notable for the breadth and depth of research, the international quality of which has been verified by Research Assessment Exercise (RAE) stretching back over a period of 20 years.

The Institute's primary purpose is to advance the understanding of transport activity, operations and use, and to develop skills and best practice among transport professionals and decision-makers.

We can help offer flexible support for your investment:

Skills support through a strong network of relationships with universities, colleges and the Department for Work and Pensions, we are able to support you to ensure your recruitment needs are met, de-risking your investment

Supply chain funded support programmes designed to help identify and develop suitable supply chain businesses

Funding that could cover up to 20 per cent of eligible capital costs in plant, equipment, machinery or property refurbishment and fit-out

Rates relief; we will work with local authorities to assess whether your investment may be eligible for business rate relief

Enterprise Zone sites with Enhanced Capital Allowances allow you to write off costs of qualifying plant and machinery against tax

Property search support including navigation of local planning issues

Data and intelligence to help to build your business case, including salary data, cost comparisons and modelling of grant support

Local support through key account management from a sector specialist to support your move, broker introductions to key partners and suppliers and provide ongoing advice and support

Assisted area status are specific parts of the country in which both SMEs and larger companies can access greater levels of public support, including additional grants, enhanced capital allowance or business rates relief

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