WELCOME TO THE LARGEST CITY REGION OUTSIDE LONDON

Leeds City Region is a £64.6bn economy, larger than nine EU countries and the largest in England outside London and the South East.

CRITICAL MASS, SPECIALIST TASKS

Over 144,200 people work in the manufacturing sector, of which 48,500 people work in advanced manufacturing in Leeds City Region (BRES 2015). The region has key specialisms in the precision engineering of turbos, pumps, gears and valves.

BUSINESS

The region is home to 7,300 manufacturing businesses with a sales turnover of over £25bn. Centre for Cities reported that Leeds had the fastest growing private sector in the UK in 2016, with over 6% 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 CLUSTER OF STEM TALENT

With the largest population of millennials in the North and 9 universities (the highest concentration of universities outside London) producing 38,900 graduates a year, 17,800 in STEAM (science, technology, engineering, arts and maths) subjects, the region is home to a significant talent pool.

LEEDS CITY REGION
15,100 STEM QUALIFIERS
2,700 CREATIVE ARTS AND DESIGN QUALIFIERS

GREATER MANCHESTER
14,300 STEM QUALIFIERS
2,200 CREATIVE ARTS AND DESIGN QUALIFIERS

GREATER BIRMINGHAM AND SOLIHULL
10,200 STEM QUALIFIERS
1,600 CREATIVE ARTS AND DESIGN QUALIFIERS

SHEFFIELD CITY REGION
10,000 STEM QUALIFIERS
700 CREATIVE ARTS AND DESIGN QUALIFIERS

LEEDS, AN EMERGING HIGH SPEED RAIL CLUSTER

Leeds City Region Local Enterprise Partnership, West Yorkshire Combined Authority, Leeds City Council and the Institute for High Speed Rail and Systems Integration (IHSRSI) all share in the same ambition, to place Leeds and the wider region at the centre of the UK’s high speed rail industry.

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’ to be located in the same area.

“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.”

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

LEEDS/WEST YORKSHIRE

Rail Industry Organisations
West Yorkshire Combined Authority

Rail Industry Assets
University of Huddersfield
Institute of Railway Research
Centre for Innovation in Rail
University of Leeds
Institute for High Speed Rail and Systems Integration
Leeds College of Building
Institute for Transport Studies

Supply Chain
White Young green
Tracsis
BAM Construction
AEDAS
WSP Rail
Hewlett Rail Ltd
Paul Mullinder Engineering
Gilchrist Engineering
Hindle Group
Archway Engineering
TMD Friction
Koyo Bearings
Billington
Cirteq
LPA Excil
Pickersgill Kaye

Aflex Hose
Siemens Mechanical Drives
DB Santasalo
Giffen Group
Qualter Hall & Co
Touchstar
ABG Geosynthetic Engineering
Anglia Metals
Kloeckner
Aquarius Rail
Central Alliance
EJOT UK
Parker Hannifin
Eurofins
Mabey
Naylor Industries
RTS Infrastructure
Trimble Tekla
Von Roll
Rosehill Polymers
Camira Fabrics
AJ Hainsworths
Instrumentel
Edison & Wanless
CCL Stressing Systems
William Cook
Premier Farnell
AUS Ltd
**York**

**Rail Industry Organisations**
- Network Rail East Coast
- Historical Railways Estate

**Train Operators**
- Northern Rail
- First Transpennine Group
- Grand Central
- Direct Rail Services (freight)

**Rail Industry Assets**
- Rail Operating Centre and Training Centre University of York
- York College
- Siemens Rail Maintenance Depot

**Supply Chain**
- Tata
- Unipart Rail
- Volker Rail Signalling
- Hyder Consultancy
- BWA Rail
- DGM Coachbuilders
- Omnicom Engineering
- Trapeze Group
- Alliance Rail Holdings
- Keir
- Arup
- AECOM
- First Class Partnership
- Signalling Solutions
- URS Scott Wilson
- Mott MacDonald
- York EMC Services
- Amey Rail
- Atkins Rail
- Babcock Rail
- JSD Rail
- Incremental Solutions
- Portastore

**Goole**

Location of Siemens Rail rolling stock assembly facility

**Doncaster/Sheffield**

**Train Operators**
- GB Railfreight
- DB Cargo

**Rail Industry Assets**
- National College for High Speed Rail
- Sheffield Hallam University
- Sheffield University
- Doncaster College
- Doncaster International Railport

**Supply Chain**
- Wabtec Rail
- Volker Rail Group
- Trackwork
- SPL Powerlines
- Colas Rail
- Agemaspark
- EM Diesel
- Hird Rail
- Trough Tec
- Polydon
- SCG
- Mayflower Engineering
- Newburgh Precision
- Birley Manufacturing
- Invertec
Institute of Railway Research (IRR)

Led by Professor Simon Iwnicki the IRR is a world leading centre of railway engineering research. With over 30 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 & performance.

The IRR is home to a full scale Pantograph dynamic test rig with 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 £30m 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.
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
- 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
- Expertise of modelling, robotics and control systems to contribute to new infrastructure (civil and digital) and train designs.
- 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.
LEEDS CITY REGION CAN OFFER FLEXIBLE SUPPORT FOR YOUR INVESTMENT:

Skills support – with 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 – a suite of funded support programmes designed to help identify suitable supply chain candidates and assist the development of these businesses

Funding – our funding could cover up to 20% 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 - a number of Enterprise Zones 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 – help to build your business case, including salary data, cost comparisons and modelling of grant support.

Local support – 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 - 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.