



# LEEDS CITY REGION

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## RAIL SECTOR



# 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.



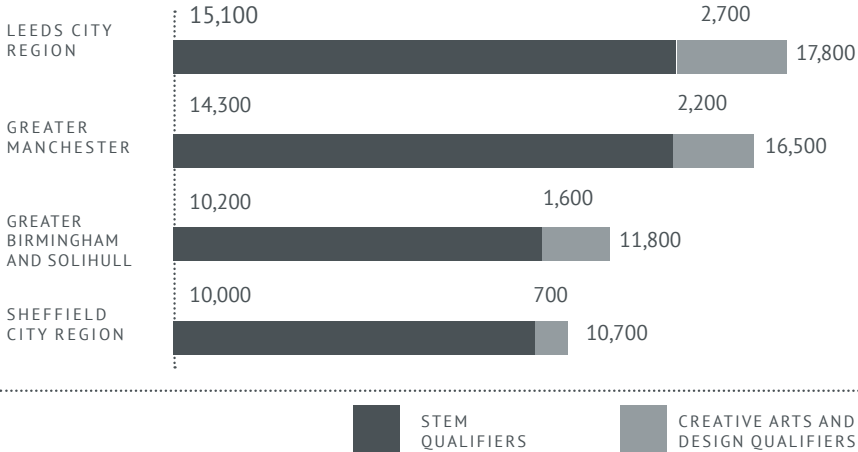
“The availability of an extensive and high quality supply chain, access to some of the best rail industry related research assets in the UK and unparalleled links to the UK transport networks, I believe, places Leeds City Region as the ideal location in the UK for rolling stock assembly”

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, 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.'

**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

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/SHEFFIEL

### **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



# 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 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.

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.

## LEEDS CITY REGION

### RAIL SECTOR

KEN BROCKBANK | MANAGER ADVANCED  
MANUFACTURING, ECONOMIC SERVICES  
TRADE & INVESTMENT

[KEN.BROCKBANK@WESTYORKS-CA.GOV.UK](mailto:KEN.BROCKBANK@WESTYORKS-CA.GOV.UK)



LEEDS CITY REGION  
ENTERPRISE  
PARTNERSHIP

LEEDS CITY REGION ENTERPRISE  
PARTNERSHIP  
CITY EXCHANGE, 11 ALBION STREET,  
LEEDS, LS1 5ES  
UNITED KINGDOM

[INVESTLEEDSCITYREGION.COM](http://INVESTLEEDSCITYREGION.COM)  
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