AUTOMOTIVE PROPOSTION FOR THE MIDLANDS REGION

THE AUTOMOTIVE LANDSCAPE
2017





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WE ARE DRIVE MIDLANDS

Drive Midlands provides a central hub for businesses; coordinating local support services for the automotive sector and collaborating more closely with higher and further education to support skills development. The aim is to support the development of SMEs to safeguard the future of the automotive industry.

- Drive Midlands has four key objectives:
- Supporting Inward Investment
- Developing a robust supply chain
- Improving partnership working

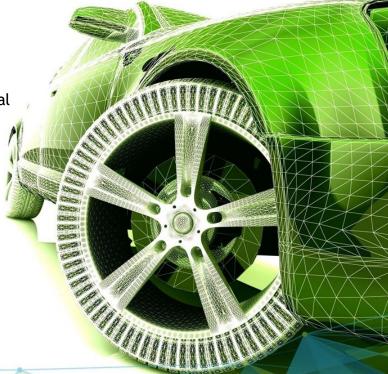
Developing a Sustainable Operation

We offer services for both international companies looking to invest in the Midlands region, as well as support services for companies and organisations already established in the area. To learn more about these services:

- <u>Click here</u> to see how Drive Midlands can support you as an international organisation setting up in the Midlands.
- <u>Click here</u> to see how Drive Midlands can support you as an existing Midlands organisation and help grow your presence in the Automotive Supply Chain.

"What it is about is joining up the economic assets across the whole area, of which we have an abundance."

Chris Hobson, Director of Policy & External
Affairs at East Midlands Chamber of
Commerce



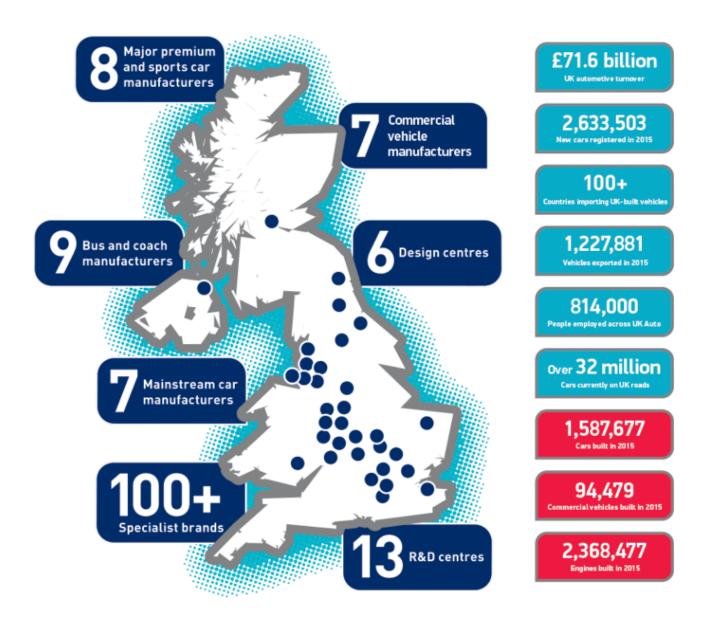


THE MIDLANDS: NATIONAL LANDSCAPE

The automotive industry is a vital part of the UK economy accounting for more than £71.6 billion turnover and £18.9 billion value added.

With some 169,000 people employed directly in manufacturing and in excess of 814,000 across the wider automotive industry, it accounts for 12.0% of total UK export of goods and invests £4 billion each year in automotive R&D.

More than 30 manufacturers build in excess of 70 models of vehicle in the UK supported by more than 2,000 component providers and some of the world's most skilled engineers.





Industry analysts predict UK car manufacturing volumes are due to reach record levels of around 2 million units by 2017 (SMMT).

There is significant market potential for supply chain companies based in the UK - the Automotive Council has identified £4 billion worth of opportunities across Tiers 1 and 2 for the UK's supply chain.

The SMMT regularly publishes a directory of funding for the automotive sector. For the latest version click here.



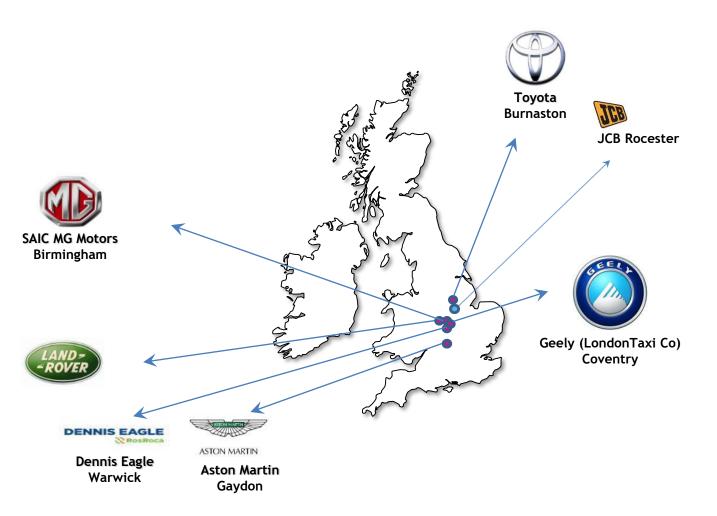


THE MIDLANDS:

REGIONAL LANDSCAPE

Positioned centrally among vehicle manufacturers and suppliers, the region provides optimum access to the UK automotive market including seven volume car manufacturers, seven commercial vehicle manufacturers, and 16 of the world's top 20 automotive suppliers. This strategic location creates efficiencies in the supply chain, and contributes to the global competitiveness of the region.

The Midlands ranks with Poland and Turkey as a top global destination for automotive foreign direct investment (Source: fDi Intellingence, Financial Times Ltd, 2017).





THE MIDLANDS:

REGIONAL LANDSCAPE

Connected Region

We are the most connected region in the UK. At the heart of the country's motorway network of the M42, M6, M1 and M5 and with the busiest railway station outside London, the Midlands Engine is within a four hour commute of 92 per cent of the UK's population. Three international airports - Birmingham International, London Luton Airport and East Midlands - serve some 25 million passengers a year, flying to more than 300 destinations. Large scale multinational companies choose the Midlands Engine as their home, knowing they are within hours of all major markets, as well as start-ups whose export potential can be realised quickly and effectively.

Automotive R&D in the Midlands

The UK Midlands is an undoubted centre of innovation in advanced manufacturing industries, supported by a number of leading facilities. 60% of the UK automotive industry's R&D by value is carried out in the region. This critical mass of R&D supporting the automotive industry is unparalleled anywhere else in the UK.

The Advanced Propulsion Centre (APC) at the University of Warwick provides the UK automotive industry with resources and facilities to develop advanced propulsion systems in low carbon technologies and supply chains. The APC has £1bn to invest over ten years in collaboration with automotive industry partners.

The Power Engineering and Power Electronics Group is an expanding research group at Aston University which undertakes research into both theoretical and practical aspects of power electronics and its impact on electrical power networks, ranging from the analysis and management of hierarchical complex networks such as power electronic systems, through to hands-on industrial experience in distribution and transmission networks. These changes are not limited to traditional distribution and transmission networks but include all electrical networks including those around aerospace and other transport media.

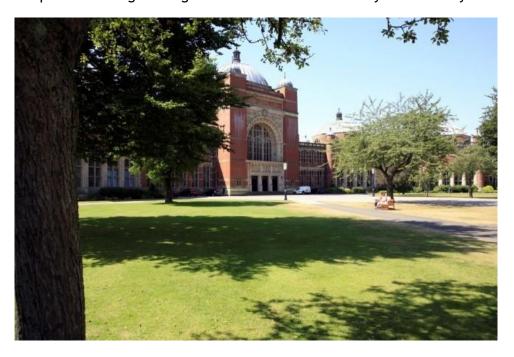




Birmingham City University have heavy engine dynamometers and environmental technologies whilst their knowledge-based engineering helps companies build the right strategies for optimum usage of equipment and technologies to drive business requirements. In the Centre for Low Carbon Research they also specialise in environmental technology, heavy fuel engine testing and recycled materials.



The University of Birmingham specialises in advanced materials, castings technology, low-carbon vehicles, new fuels, engine testing, mechanical, electrical and chemical engineering, computational engineering and is home to the Rolls-Royce University Technology Centre.







University of Warwick is home to a globally acclaimed business school and WMG (formerly Warwick Manufacturing Group). The latter specialises in new materials, lightweighting, volatile chemicals from interior trim, 3D X-ray analysis and design walls, hybrid vehicles, joining technologies, manufacturing low-carbon technologies, battery technology, noise, vibration and harshness, mechanical and electrical engineering.



The National Automotive Innovation Campus (NAIC) will be at the University of Warwick. This £150m facility will be operational from 2017 and involves partners, Jaguar Land Rover, Tata Motors European Technical Centre, WMG/University of Warwick and an expanding network of supplier companies. The NAIC will focus on the long-term multi-disciplinary challenges of the UK Automotive Council such as electric vehicles (including energy storage and e-drives), carbon reduction (including hybrids, light-weighting and composites) and smart and connected which includes on-vehicle competence, driver assist and cyber security for connected vehicles.



Midlands Enterprise Universities

Six Midlands' universities have joined forces to drive productivity and economic growth through skills, innovation and enterprise.

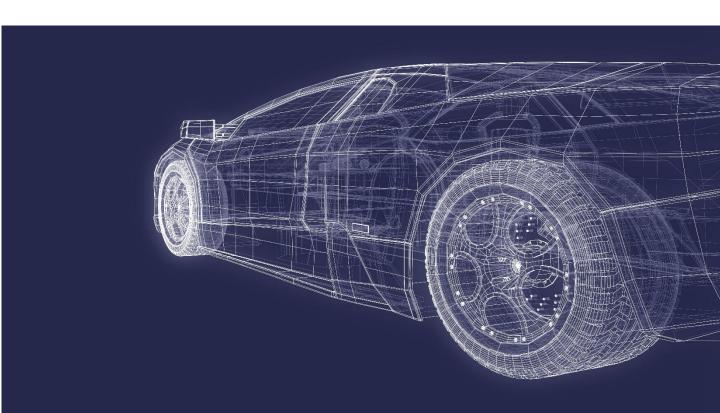
Birmingham City University, Coventry University, Nottingham Trent University, University of Derby, University of Lincoln and the University of Wolverhampton have collectively launched Midlands Enterprise Universities - a partnership which combines their research, expertise and facilities in order to further increase growth and prosperity across the region.

The new partnership will provide the Midlands Engine with a powerful resource with which it can meet its ambitious objectives focusing on higher level skills gaps, talent pipeline needs and innovation requirements. Work will also concentrate on further developing the employability and entrepreneurship of students.

West Midlands Combined Universities

In support of the West Midlands Combined Authority's commitment to increase growth and prosperity in the region, West Midlands Combined Universities (Birmingham City University, Coventry University, and University of Wolverhampton) will work in tandem to complement its strategy by:

- closing the skills gap in the automotive sector by working with local businesses to provide higher apprenticeships alongside existing degree programmes;
- retraining current industry sectors with new skills and in new technologies, as well as inspire young people to follow careers in these areas;
- encouraging cross-pollination of knowledge and ideas through applied research collaborations to bring forward innovations in priority sectors;
- combining the institutions' assets and expertise to improve the quality of what each university is already able to offer on an individual basis.





HORIBA MIRA

HORIBA MIRA is a global provider of engineering, research and test services to the automotive, defence, aerospace and rail sectors. HPRIBA MIRA works in close collaboration with vehicle manufacturers and suppliers around the world, providing comprehensive support ranging from individual product tests to turnkey engineering design, development and build programmes. HORIBA MIRA Technology Park is Europe's largest transport technology R&D cluster.







Millbrook Proving Ground

Millbrook Proving Ground provides subjective and objective measurement, robustness and durability tests and supports the design and development of vehicles. It has ISO17025 accreditation for certain environmental tests.

The teams of engineers are backed up by a wide range of testing facilities in the UK and Finland, including component test laboratories, environmental chambers, noise measurement sites and over 2,200 acres of proving grounds with specialist tracks, surfaces and indoor and outdoor facilities replicating almost all driving conditions for real-time and accelerated life cycle tests. In addition to these a number of Tier 1 and independent consultancies have key R&D facilities in the West Midlands:

- Prodrive
- Ricardo
- Denso
- ZF TRW Conekt





The Supply Chain
In the Midlands there supply chain companies and organisations to support product development from concept to volume manufacture.

MRL	1	2-6	7-9	10
evil No.	Manufacturing feasibility	Manufacturing concepts defined (MRL 2)	Prototype manufacturing system (MRL 7)	Full rate production demonstrated and lean
	assessed (MRL 1)	Manufacturing concepts developed (MRL 3)	Manufacturing process maturity demonstration (MRL 8)	production practices in place (MRL 10)
		Laboratory manufacturing process demonstration (MRL 4)	Manufacturing processes proven (MRL 9)	
		Manufacturing process developed (MRL 5)		
		Critical manufacturing process prototyped (MRL 6)		
TRL	1-3 Discovery (TRL 1) Formulation (TRL 2) Proof of Concept (TRL 3)	4-8	9	9
		Refinement (TRL 4)	System Proven (TRL 9)	System Proven (TRL 9)
		Development (TRL 5)		
		Prototype Demonstration and Transition (TRL 6) Prototype Demonstration in Operational Environment (TRL 7)		
		System Completed and Qualified (TRL 8)		



THE SUPPLY CHAIN

In the Midlands there supply chain companies and organisations to support product development from concept to volume manufacture.

Additional Market Potential	 £3bn supply chain opps for tier 1 suppliers from OEMs in the UK £2bn supply chain opps identified for tier 1 sourcing in the UK 	 £3bn supply chain opps for tier 1 suppliers from OEMs in the UK £2bn supply chain opps identified for tier 1 sourcing in the UK 	 £3bn supply chain opps for tier 1 suppliers from OEMs in the UK £2bn supply chain opps identified for tier 1 sourcing in the UK 	 £3bn supply chain opps for tier 1 suppliers from OEMs in the UK £2bn supply chain opps identified for tier 1 sourcing in the UK
Technical Support	Innovate UKEPSRCPatentboxTooling	 APC Industry Forum MIRA Technology Ltd Tooling 	 Industry Forum MIRA Technology Ltd APC Tooling 	Industry ForumMASEEFTooling
Financial Support	Funding Programme Employer Ownership Fund Advanced Manufacturi ng Supply Chain Initiative (AMSCI) Patentbox	Funding Programme Employer Ownership Fund Advanced Manufacturi ng Supply Chain Initiative (AMSCI)	Funding Programme Employer Ownership Fund Advanced Manufacturi ng Supply Chain Initiative (AMSCI)	Funding Programme Employer Ownership Fund Advanced Manufacturi ng Supply Chain Initiative (AMSCI)
Skills Case Studies	MTC	NAIC	Industry Forum	



The Supply Chain
In the Midlands there supply chain companies and organisations to support product development from concept to volume manufacture.



THE MIDLANDS:

LOCAL ENTERPRISE PARTNERSHIPS



The Black Country LEP

The Black Country is a significant economic sub-region housing over 1.17 million people, hosting 446,000 jobs and generating £19.4bn GVA per annum. The area comprises the Boroughs of Dudley, Sandwell, Walsall and the City of Wolverhampton. It covers 356 square kilometres and sits at the heart of England, with excellent national transport links, in particular to the M6, M5 and M54 motorways.

Find out more about the Black Country LEP



Coventry & Warwickshire LEP

The Coventry & Warwickshire Local Enterprise Partnership (CWLEP) is an alliance of private and public sector organisations working towards a common, shared purpose: to grow the local economy, attract new jobs and investment, and increase prosperity.

Legally incorporated in 2011, CWLEP has become a powerful platform for achieving its ambitions. With strong links to the business community and considerable public sector insight and influence, we're perfectly positioned to bring key influencers together to forge productive relationships and make things happen.

Find out more about Coventry & Warwickshire LEP

D2N2

D2N2 is the Local Enterprise Partnership (LEP) for Derby, Derbyshire, Nottingham and Nottinghamshire.



There are 39 LEPs in England. They play a central role in deciding local economic priorities, and undertaking activities to drive economic growth and create local jobs.

D2N2, established in 2010, is one of the largest LEPs in England, covering an area with a population of more than two million people and with an economic output of over £41.2billion (ONS report, February 2015).

Find out more about D2N2



Greater Birmingham

Local Enterprise Partnership

& Solihull

Greater Birmingham & Solihull LEP (GBSLEP)

Greater Birmingham & Solihull contains a population of nearly two million, and is home to a million jobs and an economy worth £40 billion. It enjoys a concentration of economic drivers second only to London, making its success key to the fortunes of the UK economy as a whole.

The LEP area constitutes a dynamic, functional economy. From travel to work patterns to shared economic assets and business linkages, the lives and fortunes of the people and institutions of the area are inextricably linked. There are high levels of travel to work within the area, across district boundaries, with large numbers of higher skilled employees living outside the Metropolitan Core.

Find out more about Greater Birmingham & Solihull



Leicester & Leicestershire Enterprise Partnership

The Leicester and Leicestershire Enterprise Partnership (LLEP) is a strategic body led by a Board made up of local government and business leaders as well as senior education and third sector representatives.

The LLEP's remit is to drive forward regeneration and growth of the local economy, by:

Working with Government to set out key investment priorities for Leicester & Leicestershire Engaging with business, local authorities, Higher Education, Further Education, the voluntary sector and other stakeholders

Facilitating local partnership working and relations with national Government Influencing national Government economic policy and spending Investing LLEP funding and aligning partner resources

Through its investments, influence and activities ensure positive outcomes for the local economy

Find out more about Leicester & Leicestershire Enterprise Partnership



Make It Stoke-on-Trent & Staffordshire

The aim of the Stoke-on-Trent and Staffordshire LEP is to create a powerful partnership combining the strengths of the public and private sectors to deliver the scale of growth needed to rebalance the local economy. The focus is on enterprise and innovation with the aim to unlock the potential of the private sector to create employment and wealth and begin growing, restructuring or sustaining the local economy. Creating the right environment in which businesses can invest and grow will be central to the success of the partnership. The scope of the Stoke-on-Trent and Staffordshire LEP includes economic development, skills, planning, housing, transport, tourism and the transition to the low-carbon economy.

Find out more about Make It Stoke-on-Trent & Staffordshire



Enterprise Telford

Recognised as the birthplace of the Industrial Revolution and hailed a new town in the 1960s, Telford combines the best of old and new giving residents a high quality of life and attracting millions of visitors per year.

In the last two years over £800m of investment has seen every secondary school in the town rebuilt or extensively remodelled, the town centre has been revitalised with improved infrastructure providing direct transport links to major cities across the UK including London.

While maintaining the reputation as a town of a thousand trees, the town boasts one of the largest town parks in the country, adjacent to a world class convention centre.

With a vibrant night time economy and a number of historic borough towns, there is something for everyone in Telford.

Find out more about Enterprise Telford

Worcestershire LEP



The Worcestershire Local Enterprise Partnership (WLEP), one of 38 in England, is responsible for creating and delivering economic growth and jobs in the County. This is achieved through a partnership approach with business, local government, the third sector and higher and further education working together with a common, shared purpose.

The WLEP is responsible for developing and delivering Worcestershire's 10-year Strategic Economic Plan which was agreed by all partner organisations and submitted to Government in March 2014.

Find out more about Worcestershire LEP

Supporting Information
Midlands Enterprise Universities
LIVE Birmingham Magazine



THE BLACK COUNTRY



Black Country LEP

MARKET OPPORTUNITY

The Black Country lies at the heart of the UK automotive industry. The area is home to a world-class manufacturing and engineering base with an unprecedented history of driving innovation forward. More than 60% of the UK's automotive R&D happens within the West Midlands. Jaguar Land Rover, Toyota, JCB, Rolls Royce, Aston Martin and BMW all have operations within close proximity. The UK is Europe's only growth market in both auto production and sales. From R&D to assembly, it has the most joined-up environment for the sector. Connect with the Black Country for an unrivalled network of skilled workers, specialist suppliers and inspired R&D teams.

As a result this sector continues to go from strength to strength and is creating major demand for high quality industrial development, presenting significant investment opportunities.

AVAILABILITY & SKILLS OF WORKFORCE

The Black Country has a population of 1.16 million, or which 712,600 are aged 16-64. A long engineering history has nurtured expertise and innovation, and a system of interlinked supply chains sees the automotive sector employing more than 19,000 people.

- 442,300 people in the Black Country are qualified to NVQ Level 3 and above (61.9% of people aged 16-64).
- 66,000 people in the Black Country work in manufacturing (14.8% compared to 8.3% across Great Britain).
- 163,500 people (33.8%) in the Black Country are employed in Group 1-3 occupations (managers, directors and senior officials, professional occupations, associate professional and technical).
- 117,800 people (24.4%) are employed in Group 4-5 occupations (administrative and secretarial and skilled trades occupations).
- 47,800 people (9.8%) are employed in process plant and machine operative occupations.

LABOUR COSTS

The Black County was ranked as one of the top 5 cost-effective regions in the UK by the fDi Magazine European Cities and Regions of the Future ranking 2016/17. On average costs are over 10 per cent lower than Germany, France, Italy and compare favourably with Eastern Europe.

COST & AVAILABILITY OF PROPERTY

The Black County was ranked as one of the top 5 cost-effective regions in the UK by the fDi Magazine European Cities and Regions of the Future ranking 2016/17. The Black Country is experiencing increasing occupier demand for high quality industrial development and has identified 150 hectares of land for development for employment use.

The Black Country is also home to England's most successful Enterprise Zone which includes i54, home of Jaguar Land Rover's Engine Manufacturing Centre, and the new DY5 Dudley's Business and Innovation Enterprise Zone.

See here for further investment opportunities.

LOCAL SUPPLY CHAIN - AUTOMOTIVE

The Black Country is at the technological heart of the UK's automotive industry. OEMs are supported by the areas extensive network of Tier 1 and Tier 2 suppliers.

The Black Country pioneered HVM City - The Opportunity Gateway. HVM City brings together contract opportunities from the United Kingdom with a emphasis on the West Midlands region. HVM City enables organisations to compete for contract opportunities linked to major public and private sector buying organisations.

THE BLACK COUNTRY

Black Country LEP

FE TRAINING PROVISION

The Black Country's growing success within the advanced manufacturing sector is supported by distinguished provision for further and higher education. Within the Black Country a range of opportunities exist for learning and development, all helping to support the skilled workforce of the future.

- Black Country Skills Factory
- Walsall College
- Dudley College
- City of Wolverhampton College
- Sandwell College
- Elite Centre for Manufacturing Skills

UNIVERSITIES & AUTOMOTIVE SPECIALISMS

The University of Wolverhampton has four campuses across the West Midlands, offering a wide range of courses and research specialism. The university has over 19,000 students, and ranks second in the UK for graduate employability. The School of Engineering offers undergraduate and postgraduate courses in a number of automotive-related fields including Automotive Engineering, Motorsports Engineering and Aerospace Engineering.

The University of Wolverhampton is investing over £10m in advanced new engineering facilities and courses in response to the regional and national shortage of qualified engineering graduates. New facilities will include a design and visualisation facility, wind tunnels, engine test facilities, 3D printing facilities, and laboratories dedicated to electronics and telecommunications, metrology and materials testing. This latest investment in teaching and learning facilities for the study of science, technology, engineering and maths (STEM) subjects follows the recent £21m investment in the Rosalind Franklin Science Centre at City Campus.

LOCAL BUSINESS NETWORKS
Black Country Chamber of Commerce

FUNDING INCENTIVES

The Black Country LEP is always working to secure funding to make available to its

businesses or those seeking to invest here. Currently there is an ever-changing and potentially confusing array of funds open to businesses with different deadlines and eligibility criteria. As a result the LEP established the Black Country Growth Hub to be the first port of call for businesses seeking support and to help them navigate through the options

Black Country Growth Hub access to finance

CENTRES OF EXCELLENCE

Advanced Manufacturing & Engineering companies in the Black Country benefit from an ecosystem of support with leading centres of excellence located here. These include:

- University of Wolverhampton-Midlands
 Simulation Group
- University of Wolverhampton Engineering Research Group
- Confederation of British Metal Forming
- Caparo Innovation Centre
- Aluminium Finishing Association
- Cast Metals Federation
- The Die casting Society

TRANSPORT INFRASTRUCTURE

Centrally located, the Black Country is one of the UK's leading supply chain centres. Air, road and rail links connect it to more than 400 million people across Europe - and half of the UK's population lies within just two hours.

- Motorways: M5, M6, M54, M6 Toll
- Rail: Under 2 hours to London; 15 minutes to Birmingham New Street
- Midland Metro: tram link from Wolverhampton city centre to Birmingham city centre

MAJOR TIER 1 SUPPLIERS

- ZF Lemforder
- Rimstock
- Cab Automotive
- Steel & Alloy (Gonvarri Steel Services)
- Truck Lite
- Huf U.K Ltd
- Gestamp
- Arcelormittal Tailored Blanks Birmingham

VEHICLE MANUFACTURERS

Jaguar Land Rover invested over £1 billion in the Black Country Enterprise Zone, putting the region on the map. Its Engine Manufacturing Centre assembles the company's new family of high-output, fuel-efficient petrol and diesel engines.

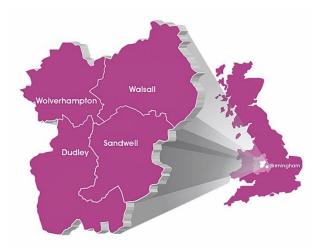
Westfield Sports Cars Ltd

REGIONAL STRENGTHS

HVM City is the Black Country's platform for driving supply chain development and intergration and supporting strategically important major contact delivery. The Automotive element of HVM City highlights the world-class supply chain in the Black Country.

FURTHER INFORMATION

http://www.investblackcountry.com/ https://www.blackcountrylep.co.uk/ http://www.hvmcity.com



Contact Us

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MARKET OPPORTUNITY

Coventry & Warwickshire is a traditional centre of automotive R&D and manufacture. From the Starley 'Rover Safety Cycle,' the forerunner of the modern Land Rover brand, through to the glamourous Le Man winning D-Type and revolutionary E-Type and XJ Jaguars of the 1950s and 1960s, to the latest zero emission/ hybrid vehicles and driverless cars, this area has developed a mature supply chain with a range of strengths. It is supported in this by two research universities with long-established links to the auto industry.

Cluster of OEMs

This is the UK's most concentrated cluster of OEMs, with over 30 OEM brands with a base in the area, including 20 OEM manufacturing sites and over 25 OEM R&D centres.

Auto Supply Chain

The area has developed a diverse auto supply chain, which includes body pressings from Cov Press, Ricor, CAD CAM and Sertec, braking and clutch systems from Raicam and AP Racing, to vehicle interiors from Dau Draxelmaier, Antolin and Autins, through tooling suppliers such as Expert Tooling, to powertrain technologies with Delphi, Cummins, Mahle and FEV.

New industrial parks have allowed these companies to expand or locate in the area for the first time, at sites such as Birch Coppice and Hams Hall.

Prototyping & Vehicle R&D

The area has a number of specialist prototyping and low volume build companies, that support local and international OEMs, as well as motorsport, defence and other new sectors such as life sciences.

Envisage, HPL Prototypes, Penso and Contechs are some of the highly agile and innovative companies helping drive forward auto technology and niche products in the Midlands.

JLR's Oxford Road SVO (Specialist Vehicles Operations) develops and manufactures high end, bespoke vehicles for Jaguar and Land Rover customers. Similarly, Aston Martin's new Wellesbourne facility delivers its limited run supercars such as the recent Vulcan supercar. The success and number of local OEMs has attracted a number of technology companies to the area in recent years, with TATA Technologies creating a new European HQ in Warwick, EDAG

setting up a base in Learnington Spa, and Applus Idiada creating a new facility in Nuneaton.

Software & Cyber

Coventry & Warwickshire is an important UK centre for B2B and entertainment software and ICT in the UK, with a long established presence from IBM and Siemens.

The area is a major centre of games development, virtual reality and gamification, with the local 'Silicon Spa' cluster a leader in racing and driving games. Local names include Codemasters, Playground Games, and recently SEGA and Ubisoft.

As cyber security and automotive onboard software, as well as and connected and digital factories become ever more important, the local software skills supply chain will become ever more important to the advanced manufacturing and auto sectors.

Connected & Autonomous Vehicles

Coventry & Warwickshire is a leader in the development and deployment of Connected & Autonomous Vehicle technologies (CAV). HORIBA-MIRA is a major automotive consultancy with significant capabilities in these technologies WMG at the University of Warwick is researching CAV and has developed a unique drive in simulator.

The New National Transport Design Centre (NTDC) at Coventry University will explore new areas of transport design research bringing designers, technologists, coders, together with artists, gamers, material specialists and fashion experts. It will use leading edge technology to create and refine new solutions.

All OEMs are increasingly active in connected vehicle technologies, from driver aids to mobile device connectivity; an increasing number are looking at driverless technologies. UK CITE and UK Autodrive are major CAV trials taking place on the roads of Coventry and Warwickshire, in partnership with HORIBA-MIRA, local universities and OEMs including Jaguar Land Rover and Ford. Coventry's RDM Group has developed the Lutz Pathfinder, a driverless pod, which is being deployed in the UK Autodrive trial.



Low Carbon Vehicles

Coventry & Warwickshire is recognised as a global centre of low carbon vehicle technology. Jaguar Land Rover's global powertrain centre is located in Whitely, Coventry where it developed the new range of Ingenium engine range and is working with WMG on batteries, energy storage and light-weighting, for future electric and hybrid vehicles.

BMW's Hams Hall facility produces smaller capacity engines for BMW and MINI, and is the global centre for the manufacture of the electric powertrain for the i8 supercar.

Geely London Taxi is developing a new range of electric hybrid taxi and commercial vehicles, to be manufactured at a new site in Ansty. The TX5 taxi is due to debut soon.

The H2EV is a hydrogen powered city car under trial and development by Microcab Industries in Coventry.

The Advanced Propulsion Centre at the University of Warwick, is part of a £1bn 10 year investment by the UK Government in Low Carbon Vehicle propulsion systems, where OEMs are working with SMEs to develop transport propulsion systems of the future.

The 33,000sqft National Automotive Innovation Campus (NAIC), opening in 2018, is a joint venture between Government, academia and auto OEMs to develop future automotive technologies.

Recent inward investment successes include:

- the unveiling and ongoing development of the fully electric Jaguar iPace concept
- JLR's SVO (Specialist Vehicle Operations)
 Oxford Road site, which develops and delivers bespoke and limited edition premium products for niche customers
- JLR is investing heavily in new powertrain facilities at Whitley and product development facilities at Gaydon, with the new Triangle and NVH buildings.
- £300m investment from Geely in the London Taxi Company, to develop the new hybrid TX5 taxi and a brand new factory at Ansty
- Detroit Electric's creation of a global manufacturing centre in Leamington Spa.
- China Red Sun investment of £50m in a new

- vehicle development centre at CAD CAM (formerly Stadco/Motor Panels)
- ADV's Dynamo fully electric taxi in partnership with Nissan
- Bosch Motorsport and LG's new bases at University of Warwick Science Park
- Contechs, specialists in low volume build and prototyping, and suppliers to major OEMs, have expanded rapidly in the last two years, more than doubling in size locally
- Powertrain company AVL have announced the creation of a new site in Coventry & Warwickshire
- Dau Draxelmaier and Autins have set up new manufacturing sites at Birch Coppice
- Imagination Europe Ltd expanded into Coventry from London, and in recent months have delivered virtual reality experiences for JLR







FE TRAINING PROVISION

WMG Academy for Young Engineers

Focuses on STEM subjects along with engineering subjects that have been developed by industry partners to support pipeline talent.

- City College Coventry
- Henley College Coventry
- Coventry University College
- Warwickshire College Group
- North Warwickshire & Hinckley College
- Stratford-upon-Avon College
- Rugby College
- Lloyds Bank Advanced Manufacturing Training Centre

UNIVERSITIES & AUTOMOTIVE SPECIALISMS

University of Warwickshire

Courses.

- Automotive Engineering (UG)
- Manufacturing and Mechanical Engineering (UG)
- Sustainable Automotive Engineering (MSc)
- Applied Engineering Programme (part-time UG)

Research:

- Intelligent Vehicles
- Materials and Manufacturing
- Sustainable Materials and Manufacturing
- Additive Layer Manufacturing and Machining
- Metrology
- Automation Systems
- Cyber Security
- Energy Storage and Management
- Battery Chemistry Scale-up
- Complex Electrical Systems
- Advanced Propulsion Systems
- Supply Chain
- Electrical and Electronic Engineering
- Mechanical and Process
- WMG part of the High Value Manufacturing Catapult

Coventry University

- Institute for Advanced Manufacturing and Engineering
- NTDC (National Transport Design Centre)

Courses:

- Automotive Engineering (UG/ MSc)
- Electronic Engineering (UG)

- Engineering (part-time)
- Motorsport Engineering
- Mechanical Engineering
- Manufacturing Engineering
- Automotive and Transport Design
- Interior Design

Research

- Manufacturing and Materials Engineering
- Mobility and Transport

CENTRES OF EXCELLENCE

Manufacturing Technology Centre

The Manufacturing Technology Centre (MTC) develops and proves innovative manufacturing processes and technologies in an agile, low risk environment, in partnership with industry, academia and other institutions. We focus on delivering bespoke manufacturing system solutions for our customers.

<u>HVM Catapult Centre - Manufacturing processes</u> and systems

The High Value Manufacturing (HVM) Catapult is the catalyst for the future growth and success of advanced manufacturing in the UK. Our 7 Technology and Innovation centres work with companies of all sizes to bridge the gap in - and accelerate the activity between - technology concept and commercialisation. Our centres offer access to leading edge equipment, expertise and an environment of company collaboration.

Proving Factory

The Proving Factory wraps automotive standards of New Product Introduction around your application ready technology.

Advanced Propulsion Centre

The role of the Advanced Propulsion Centre is to position the UK as a centre of excellence for low carbon propulsion development and production. The APC team brings together and supports those who have good ideas in the form of innovative technologies with those who can bring them to market as products.

NAIC - Public private centre at University of Warwick bringing together academics, engineers and students.



HORIBA-MIRA

HORIBA MIRA is a global provider of pioneering engineering, research and test services to the automotive, defence, aerospace and rail sectors. We work in close collaboration with vehicle manufacturers and suppliers around the world, providing comprehensive support ranging from individual product tests to turnkey engineering design, development and build programmes.

Warwick Manufacturing Group (WMG)

An academic department of the University of Warwick, we have over 500 people working across seven dedicated research and education centres, on the Warwick campus, plus collaborative centres in seven countries. With an annual programme of £180m, which includes industrial and in-kind support, we continually invest in state-of-the-art facilities and expertise to keep us at the forefront of innovation in our research, education and knowledge transfer activities.

MIRA Technology Park

Europe's fastest growing transport technologies focused engineering campus.

National Automotive Innovation Centre

Public private centre at University of Warwick bringing together academics, engineers and students.

National Transport Design Centre

New transport technologies building.

JLR Whitley Powertain Centre

JLR Gaydon Vehicle Engineering Centre

Aston Martin Global Engineering HQ

Aston Martin has four UK sites, with three in Coventry & Warwickshire. Gaydon is the global HQ and engineering and manufacturing centre.

Geely London Taxi Global Engineering

Geely London Taxi Company is expanding rapidly with a new head quarters and manufacturing site at Ansty Technology Park. With Emerald Automotive, it is developing a new hybrid electric platform.





TATA Motors European Technology Centre (TMETC) is TATA Motors research centre at the University of Warwick.

<u>JLR SVO (Specialist Vehicle Operations)</u> at Oxford Road develop niche and high-end and bespoke vehicles.

LOCAL BUSINESS NETWORKS

- Gauge & Tool Makers Association GTMA
- CW Growth Hub
- MIA (Motorsport Industry Association)
- Tech Central

MOTORSPORT

Coventry & Warwickshire has long links to motorsport, from the Le Mans winning Jaguars of the 1950s and 1960s, the Coventry Climax powered F1 racers of the 1960s, pioneering racing 16-valve engines of the 1970s, to the Judd powered Williams of the 1980s to the racing touring cars and sportscars from Jaguar and Aston in more recent years.

Coventry & Warwickshire today is home major OEMs and their supply chains. Some of these are also active in motorsport, including Aston Martin and Jaguar, the latter having joined the new Formula E-Series. The Coventry & Warwickshire auto supply chain continues to be active in motorsport.

The area is well located for <u>Donnington Park</u> and Silverstone, and Coventry & Warwickshire also sits in the <u>High Performance Technology & Motorsport Cluster</u>, in and around Silverstone.

Our local cluster includes MAHLE engine systems and Engine Developments, sportscar and performance racing transmissions at Ricardo MTC Leamington Spa; AP Racing clutch and braking technology, Bosch Motorsport located at the University of Warwick, Triumph Motorcycles at Hinckley, major tyre manufacturers Continental, Michellin, Pirelli and Bridgestone at MIRA Technology Park and Warwick Tech Park.

Coventry & Warwickshire is also home to 'Silicon Spa', one of the leading games development clusters in the UK. It is home to global AAA studios including SEGA and Ubisoft, and has particular strengths in vehicle drive and simulation. It is home to Codemasters, makers of the official F1 2016 racing game and Playground Games, makers of the Forza Horizon street racing series for Microsoft.

Coventry & Warwickshire is home to two Catapult Centres, including WMG, which is a leader in lightweighting and energy storage.

EXPERTISE - AUTO

- Low Carbon Powertrain R&D
- connected Autonomous Vehicles
- Product Design & Development
- Low volume build
- Lightweighting
- Energy Storage

FUNDING & INCENTIVES

Business Rate Relief

As well as the national small business rate relief support, Nuneaton & Bedworth can potentially offer Discretionary Rate Relief (up to 40% over three years) to any business who is expanding or relocating into the Borough, and can demonstrate the creation of new employment.





The Coventry and Warwickshire Business Support Programme

The Coventry and Warwickshire Business Support Programme is part-funded by the European Regional Development Fund with further support from Warwickshire County Council and Coventry City Council.

Coventry & Warwickshire Innovation Programme

For businesses based in Coventry & Warwickshire, employ fewer than 250 people and developing innovative products or services, we are here to help.

<u>Coventry and Warwickshire Green Business</u> Programme

The Coventry and Warwickshire Green Business Programme is open to businesses with less than 250 employees situated in Coventry and Warwickshire. The programme offers one-to-one and one-to-many support activities.

TRANSPORT INFRASTRUCTURE

- London in one hour by train
- Close proximity to Midlands Motorway Network: M1, M69, M6, M42, M40
- Rail linked sites at Birch Coppice, Hams Hall, DRIFT III



OEM'S



Cov & Warks OEM's

LABOUR COST & AVAILABILITY





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D2N2 - DERBY, DERBYSHIRE, NOTTINGHAM, NOTTINGHAMSHIRE



MARKET OPPORTUNITY

Derby shire is known globally for its strengths in advanced transport technologies due to the location of OEMs and their supply chains. Toyota's principal UK manufacturing plant, the World Headquarters for Rolls-Royce Civil Aerospace and nuclear, Bombardier, the UK's only major rolling stock manufacturer, and the World's largest cluster of rail consultancies are all based in Derby; together with JCB Power Systems Plant making the city and county an established centre of advanced manufacturing excellence.

Investment Successes:

- Toyota employs 3,000 people at its Burnaston Plant in Derbyshire manufacturing the Avensis and Auris Hybrid models.
- Changan Changan Automobile Company, a Chinese car manufacturer, recently opened it's European research and development site at Nottingham Science Park.
- Futaba Major Japanese investment made in 2004. Futaba is one of the first European "Just in Time" sequenced suppliers in the automotive welding industry. Major Clients include Toyota and JLR.
- Bowler Motorsport- Bowler is a market leader in the production of racing and high performance all terrain vehicles. The company has seen major investments in recent years moving to a new production facility in Belper, Derbyshire in 2014.
- epm: technology group Produces carbon fibre components for high-performance engineering and F1 motorsport. The company has made a major investment in Derby. The company is one of the most advanced and respected composite engineering businesses in Europe.
- Ferdinand Bilstein World leading specialist in the automotive aftermarket. This is the latest investment in Derbyshire with the construction of a 225,000sqft facility in 2016 at Markham Vale Business Park.

AVAILABILITY & SKILLS OF WORKFORCE

Derby has the highest proportion of hi-tech employment in the country with 12% of the workforce employed in hi-tech functions - four times the UK average. Between Rolls Royce, Toyota and Bombardier, the three companies employ over 22,000 people with many more employed within their supply chains.

Nine million people reside within 20 miles of Derbyshire giving access to an excellent skill pool. Its central location means that companies based here can access skills and workforce from the surrounding cities of Nottingham, Sheffield, Manchester and Birmingham.

COST & AVAILABILITY OF PROPERTY

Derbyshire benefits from two Enterprise Zones. Infinity Park Derby which is located to the south adjacent to Rolls Royce's Civil Aerospace Headquarters of the City and Markham Vale which is located at Junction 29a of the M1. Both Enterprise Zones offer Design and Build opportunities with an average cost of £5.25 - £5.50psf.

Other property options are available on key arterial routes and in the City Centre.

LOCAL SUPPLY CHAIN - AUTOMOTIVE

- Toyota principal UK Manufacturing Plant
- JCB Diesel Engine Manufacturing Plant

LOCAL SUPPLY CHAIN - MOTORSPORT EPM Technologies

FE TRAINING PROVISION

Derby Manufacturing University Technical College focuses on manufacturing and engineering where leading employers including Rolls Royce and Toyota are assisting in developing the curriculum to meet workforce need.

UNIVERSITIES & SPECIALISMS

- Institute for Innovation in Sustainable Engineering
- University of Derby

LOCAL BUSINESS NETWORKS

- Marketing Derby Bondholders
- East Midlands Chamber
- Business Peak District
- Chesterfield Champions

D2N2 - DERBY, DERBYSHIRE, NOTTINGHAM, NOTTINGHAMSHIRE



FUNDING INCENTIVES

D2N2 Growth and Innovation Programme

The D2N2 Growth and Innovation Programme is a partnership initiative led by EMB that brings together the following partner grant schemes:

Derby and Derbyshire Enterprise Growth Fund

Grant funding to a maximum of £50k for eligible investment and job creation by firms outside of the Derby travel to work area but within Derbyshire.

Invest to Grow

Grants or loans - according to the needs of the business - are available for up to 30% of the cost of investment to help create long term sustainable job growth. Minimum award size is £15k and maximum award size is £250k.

<u>University of Nottingham N2 Business Growth</u> Programme

The N2 Business Growth Fund provides grants to support businesses in Nottingham and Nottinghamshire that are planning to grow through innovation. Focusing mainly (but not exclusively) on small and medium-sized businesses (SMEs), the fund contributes to investment in capital projects, research & development and new technologies, leading to business growth and the creation of new jobs.

Nottinghamshire Economic Development Capital Fund

The Nottinghamshire Economic Development Capital Fund provides capital grants from £20,000 to a maximum of £250,000 to help businesses grow and employ more local people.

Click here for more information on Funding

CENTRES OF EXCELLENCE

Enscite Innovation Centre offers workspace and specialist support for Transport Equipment Manufacturers. This is a collaboration between Derby City Council, University of Derby and University of Aston.

VEHICLE MANUFACTURERS Tovota

MOTORSPORT

Epm: technology group

MAJOR TIER 1 SUPPLIERS Futaba

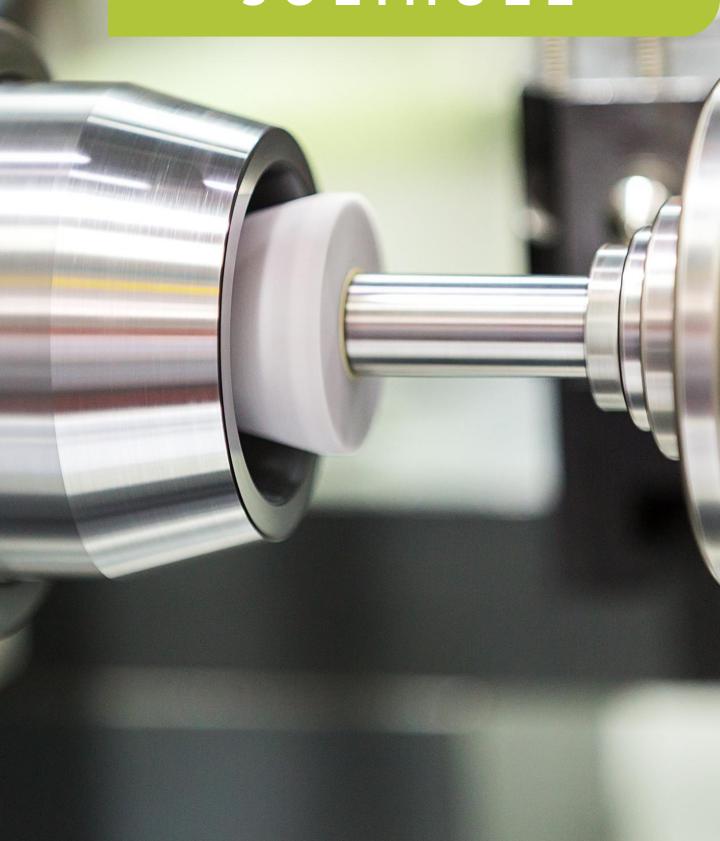
TRANSPORT INFRASTRUCTURE

- Road Derbyshire is within two hours travel by road of most of the country - making it one of the most accessible places in the UK. It is served by an extensive network of motorways and major roads as well as direct rail links to London (90minutes), Birmingham, the North West and the North East.
- International travel four international airports are within easy reach. The closest is Nottingham East Midlands - the second largest air freight hub in the country after Heathrow.

Contact Us

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d2n2lep.org





GREATER BIRMINGHAM & SOLIHULL

Greater Birmingham & Solihull Local Enterprise Partnership

MARKET OPPORTUNITY

Greater Birmingham & Solihull contains a population of nearly two million, and is home to a million jobs and an economy worth £40 billion. It enjoys a concentration of economic drivers second only to London, making its success key to the fortunes of the UK economy as a whole.

The LEP area constitutes a dynamic, functional economy. From travel to work patterns to shared economic assets and business linkages, the lives and fortunes of the people and institutions of the area are inextricably linked. There are high levels of travel to work within the area, across district boundaries, with large numbers of higher skilled employees living outside the Metropolitan Core.

Find out more about Greater Birmingham & Solihull

COST & AVAILABILITY OF PROPERTY

Advanced Manufacturing Hub

The Advanced Manufacturing Hub is based at the <u>Aston Regional Investment Site</u> and is one of the region's Economic Zones providing a wealth of opportunities for the growing automotive supply chain as well as other advanced engineering activity.

£8 million of public sector investment in site assembly and access improvements has provided a ready-to-occupy site, currently being offered to the market in three phases.

The site in North Birmingham is at the centre of the UK motorway network and has good access to the major national transport routes such as the A38 (M) and Junction 6 of the M6 providing easy access to the largest range of automotive supply chain opportunities in the UK.

In total, the Advanced Manufacturing Hub offers the opportunity for 100,000 sqm of new floor space, accommodating approximately 3,000 jobs.

FE TRAINING PROVISION South & City College



The college offers a wide and varied range of motor vehicle college courses, including service and repair, body repair, paint refinishing and motorsport.

Courses:

Automotive Engineering

Bournville College



Bournville College offers a range of practical sessions in the engineering lab, invaluable theoretical lessons and hands-on activities to make sure you are well prepared and have the tools needed for engineering.

Courses:

<u>Electronics & Engineering</u> <u>Motor Vehicle Maintenance</u>

GREATER BIRMINGHAM & SOLIHULL

Solihull College



Here at Solihull College & University Centre we offer a wide range of engineering programmes, so whether you want to work with aircrafts, motor vehicles or electrics, we have the course for you.

Courses:

Apprenticeships Engineering

Birmingham Metropolitan College



After specialising in the study of mechanical engineering, electrical/electronic engineering or the building services environment, employment opportunities include working as an aeronautical engineer, CAD technician, software developer, telecommunication specialist, building inspector, construction manager, design consultant or safety officer. Courses:

Engineering & Motor Vehicle

UNIVERSITIES & AUTOMOTI

SPECIALISMS



We are a recognised leader in education, training and business solutions, offering a wide range of courses that benefit from active engagement with regional, national and international industry giving students the best possible introduction to modern engineering.

Courses:

Engineering Courses

The University of Birmingham



Birmingham has been challenging and developing great minds for more than a century. Characterised by a tradition of innovation, research at the University has broken new ground, pushed forward the boundaries of knowledge and made an impact on people's lives. We continue this tradition today and have ambitions for a future that will embed our work and recognition of the Birmingham name on the international stage.

Courses:

Electronic, Electrical and Systems Engineering Mechanical Engineering





Aston University



Founded in 1895 and a University since 1966, Aston is a long established research-led University known for its world-class teaching quality and strong links to industry, government and commerce.

Courses:

School of Engineering & Applied Science

LOCAL BUSINESS NETWORKS

Manufacturing Growth Hub

The Manufacturing Growth Programme (MGP) provides free advice and support to manufacturing SMEs to help:

- Identify opportunities and create plans for growth and improvement
- Work with the best external experts to implement those plans
- Cover 35% of the cost of implementing the plans through a growth/improvement grant
- Connect to wider support to maximise opportunities for growth

Property Investment Programme PIP

Fully funded by the European Regional Development Fund (ERDF) the grant is designed to help businesses to improve their commercial premises by providing financial support towards the cost of building improvement works.

<u>European Regional Development Fund Property</u> <u>Investment Programme</u>

This grant is designed to help businesses to improve their commercial premises by providing financial support towards the cost of building improvement works. The primary purpose of the scheme is to increase and/or improve business accommodation and to help create new employment opportunities.

Enterprise Europe Network Midlands

Enterprise Europe Network helps businesses in the Midlands to innovate, grow and succeed internationally.

Aston University Knowledge Transfer Partnerships

Knowledge Transfer Partnerships (KTP) provides links to the expertise you need to grow your business. KTP is a world-leading programme which helps businesses to grow and succeed through their connection with Aston University.

Innovation Vouchers

Apply for an Innovation Voucher, worth £2,500 to support an innovation project.

Access free support in the form of workshops to become more competitive and manage growth effectively. Each SME needs to match every £1 received with £1 of company's own funds. Part funded by ERDF.

EEF The Manufacturers Organisation

EEF provide advice, consultancy and training, helping you to achieve cost-effective compliance, high productivity and business agility. Whether you prefer support by telephone, online or on-site, we have a solution to suit every business size and budget. We also have an extensive selection of online guidance and tools, covering HR and employment law.

Lead Limited

LEAD, has developed a very unique Government funded programme aimed at supporting clients with their ongoing Continuous Improvement journey by engaging employees in live improvement activity using cross functional teams from all departments and levels in offices through to shop floor and manufacturing areas. The programme involves practical and interactive training which is then applied to real company projects that generate significant quantifiable benefits in cost, quality, and delivery (QCD).



FUNDING & INCENTIVES

The West Midlands and Liverpool City Region Programme

The primary purpose of the West Midlands and Liverpool City Region Programme is to help support the development of productive capacity in the automotive and aerospace supply chains in the four LEP areas of Black Country, Coventry and Warwickshire, Greater Birmingham and Solihull and Liverpool City Region. The fund will adopt a flexible approach to funding (loans and grants) focusing on the provision of funding towards the purchase of capital equipment and funding working capital requirements as well as funding the complementary requirement of R&D and skills development. It is designed to promote closer collaboration within the supply chain and to address market failures.

Tooling Fund

The £24m Tooling Funding Programme has been created to help toolmakers and component manufacturers fund the design, development and manufacture of tooling or the expansion of tooling capacity. It is open to manufacturing companies seeking a loan of £50,000 to £1m, although funding requests in excess of this will be considered by exception.

Green Bridge Supply Chain Programme

The Green Bridge Supply Chain Programme is a component of the £33m Business Growth Programme, which is a comprehensive business support package part-funded by the European Regional Development Fund (ERDF).

Finance - Grants - Solihull

The Business Investment team can help identify appropriate available finance and grant programmes to support your business - whether it be a Knowledge Transfer Partnership with a local university, through to start up loans. The team can also assist on the latest national and regional funding rounds including Regional Growth Fund.

Business Growth Programme

Part funded by the European Regional Development Fund, this package of business support is designed to strengthen supply chains, stimulate innovation and grow existing Small to Medium sized Enterprises (SMEs) across Greater Birmingham and Solihull.

Carbon Trust - Green Business Fund

The Green Business Fund from the Carbon Trust is offering up to 30% of the total project cost for energy efficient equipment upgrades and refurbishments for SME's, up to a maximum of £10,000. Free surveys and advice about equipment suppliers and solutions are also available.

<u>Click here for more information on funding and finance</u>

VEHICLE MANUFACTURERS

- Jaguar Land Rover Solihull
- Jaguar Land Rover Castle Bromwich
- Potenza Sports Cars Limited
- Zolfe Cars Limited
- SAIC Motor UK Technical Centre Limited
- Changan UK R&D Centre Ltd



CENTRES OF EXCELLENCE

Birmingham City University Centre of Excellence for Heavy Diesel Emissions Engineering

Birmingham City University have heavy engine dynamometers and environmental technologies whilst their knowledge-based engineering helps companies build the right strategies for optimum usage of equipment and technologies to drive business requirements.

Centre for Low Carbon Research

A rapid transition towards a low-carbon economy is a global priority if we are to reduce climate change due to increasing consumption of energy and to create a more sustainable society.

This needs close-to-market research to reduce the carbon emissions of existing technologies, fundamental research into alternative energy sources and reduction of energy demand. Such research requires a multi-disciplinary approach, combining technological expertise with an understanding of societal factors including public policy that govern uptake. This is a major focus of research funding from the EU and UK governments and research councils.

<u>University of Birmingham Hydrogen and Fuel</u> <u>Cell Research</u>

The University of Birmingham specialises in advanced materials, castings technology, lowcarbon vehicles, new fuels, engine testing, mechanical, electrical and chemical engineering, computational engineering and is home to the Rolls-Royce University Technology Centre. University of Birmingham is a key founding partner in the development of the £40 million Manufacturing Technology Centre (MTC) at Ansty Park near Coventry. Its goal is simple: to become a world-class global research facility. The university also specialises in advanced materials, castings technology, low-carbon vehicles, new fuels, engine testing, mechanical, electrical and chemical engineering, computational engineering and is home to the Rolls-Royce University Technology Centre.

Aston University - The Power Engineering and Power Electronics Group

Power Electronics, Machines and Power System Group is an expanding research group at Aston University which undertakes research into both theoretical and practical aspects of power electronics and its impact on electrical power networks, ranging from the analysis and management of hierarchical complex networks such as power electronic systems, through to hands-on industrial experience in distribution and transmission networks.

Continually developing pioneering activities, the university has acquired brand new multi-fuel dynamometers enabling them to test hydrogen fuel cell cars on campus.

TRANSPORT INFRASTRUCTURE

Greater Birmingham is located at the heart of the UK's motorway and rail network, offering unparalleled connectivity. Air, rail and road links connect the region to over 400 million people across Europe.

Over three million people reside in Greater Birmingham, whilst over half the UK population lies within two hours and 90% are within a four-hour travel time. Meanwhile, London is only a one hour 15 minute train ride away.

The arrival of <u>HS2</u> will bring easy, high speed travel between Birmingham and London to millions of people. It will also act as a major catalyst to transform the wider region, creating over 100,000 jobs and adding £14 billion to the economy, thanks in part to the world-class stations planned at Curzon Street in Birmingham city centre and UK Central in Solihull.

Birmingham New Street Station is the busiest station outside London, and the busiest interchange station in the UK. The £750 million redevelopment of the station, which incorporates the Grand Central retail complex completed in 2015, with passenger capacity increased to 52 million people annually, creating a truly world-class transport hub.

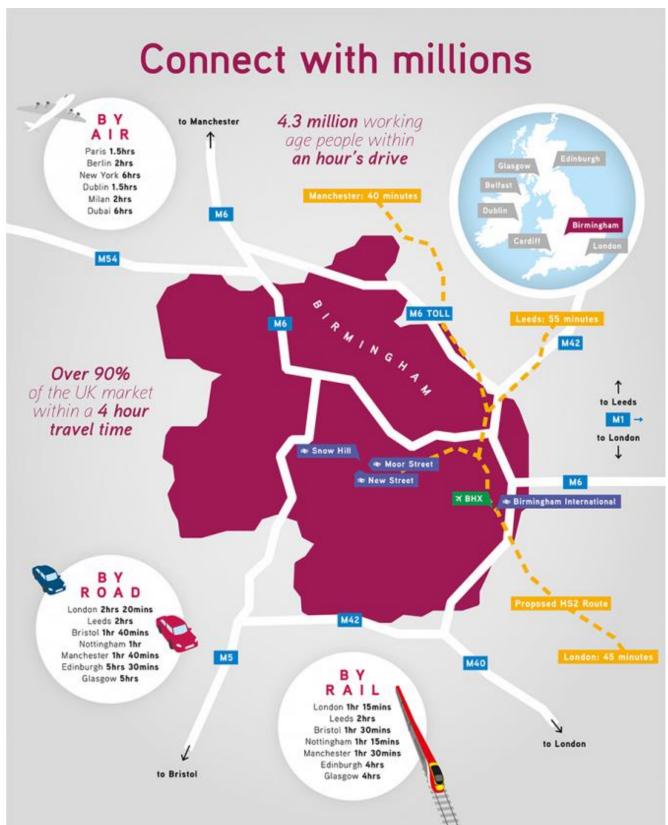


The Midland Metro tram

The Midland Metro Tram network provides regional connectivity between the Black Country and Birmingham.

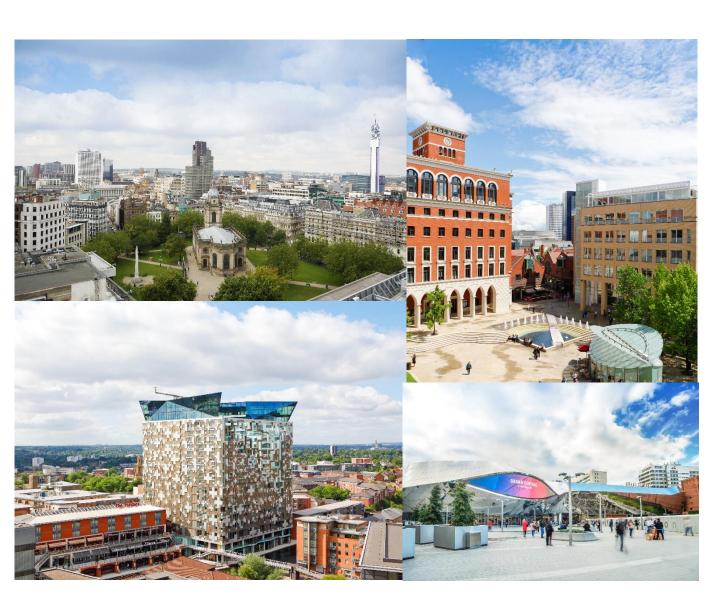
Birmingham Airport

Birmingham Airport is the UK's third largest airport outside London with over 50 airlines operating to 140 direct routes, is forecast to handle around 15 million passengers a year by 2020 - an increase of five million passengers.





Greater Birmingham is experiencing unprecedented levels of investment and growth, which has established the region as one of Europe's leading destinations of choice to live, work and invest in. Major companies are locating and expanding here, whilst significant investment in the region's infrastructure has resulted in a transport network to match any global destination.



Contact Us

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MARKET OPPORTUNITY

In Leicester you have access to an international network of individual and welcoming people who collectively speak more than 100 languages. Whether you are seeking bright young minds to develop future technology, those with proven practical skills or a range of experienced professionals, Leicester has the workforce to make your business thrive.

The city and county recognises the importance of the transport sector, and its long history of engineering has resulted in today's diverse range of engineering skills that are used to produce a number of high quality products. Leicester and Leicestershire's economy is worth £19.4 billion, the largest in the East Midlands, providing 435,000 jobs through 33,000 trading businesses, many of which are in the automotive sector. This bit has been added to the front of the brochure.

COST & AVAILABILITY OF PROPERTY MIRA Technology Park

At the geographical centre of the UK's automotive sector, the 2 million sq. ft.
Technology Park provides bespoke property solutions for customers by designing and delivering buildings exactly for their R&D needs, alongside an existing range of flexible, laboratory and workshop space. The Technology Park is close to most UK OEMS and their supply chains.

FE TRAINING PROVISION

<u>Loughborough University Science & Enterprise</u> Park (LUSEP)

Situated just one mile from junction 23 of the M1, LUSEP is one of the most accessible science parks in the UK and at 106 hectares is also one of the largest.

Set in high quality parkland the first phase of LUSEP is already home to a thriving science and research community leading the way in energy / low carbon technologies, advanced engineering and sports technology. It brings together over 55 high-tech companies from dynamic start-ups to R&D facilities of global brands, together with national sports governing bodies, a world-class research-intensive university and a vast pool of graduate talent.

Loughborough College



The college offers courses which have been designed in close collaboration with employers and industry leaders to provide the most up-to-date practices needed for working life. With access to their Motor Vehicle Body & Paint Workshop and ATA training facility, their courses are predominantly hands-on.

Courses: Mechanical Engineering

Leicester College



The college has invested significantly in motor vehicle training, opening a new specialist facility on campus in 2008. It includes a body shop with paint spray booth, vehicle repair bays with ramps, an MOT testing station incorporating a rolling road plus specialist facilities for motorcycle repair.

Courses: Automotive Engineering



Stephenson College



Courses cover the basic technical needs for today's motor vehicle repair industry, and provide essential knowledge for service technicians working on light vehicles in all types of garage, dealerships and maintenance depots.

North Warwickshire & Hinckley College



Courses are designed by industry specialists and the Institute of the Motor Industry to provide

the skills, knowledge and abilities to become a Motor Vehicle Technician. This will include routine vehicle maintenance and inspections including servicing, repairing and replacing parts and maintaining records in a motor vehicle environment.

Courses:

Mechanical Engineering Motor Vehicles/HGV

Brooksby Melton College



Courses are designed to provide essential background knowledge needed to become qualified, fully-skilled service technicians working on vehicles in all types of garages, dealerships and maintenance depots, and to be able to carry out diagnostic and repair techniques.

Courses: Motor Vehicle Engineering

South Leicestershire College



Courses contain general engineering topics as well as an emphasis on mechanical engineering. The college also offers courses covering the basic technical needs for today's motor vehicle repair industry, providing essential knowledge for service technicians working on cars, vans and motor cycles in garages, dealerships and maintenance depots. Industry standard tools and equipment are provided in the college workshop environment.

Courses:

Mechanical Engineering
Motor Vehicle Maintenance & Repair



UNIVERSITIES & AUTOMOTIVE SPECIALISMS University of Leicester



The University of Leicester is ranked in the top 1% of universities in the World by the Times Higher Education World University Rankings 2014-15.

The Department of Engineering is one of the largest departments in the University, with around 600 undergraduate and 100 postgraduate students and researchers, more than 35 academic staff and a similar number of support staff. The department is internationally renowned for quality research and excellent teaching, and has links with many of the world's major engineering companies.

Courses: Mechanical Engineering

De Montfort University



De Montfort University (DMU) is a dynamic institution with a long and vibrant history of improving people's lives through education. 95% of recent graduates are in work or further study, and DMU has been named by the Universities and Colleges Admissions Service (UCAS) as one of the UK's fastest-growing for UK and EU students.

Courses: Mechanical Engineering

Loughborough University



Loughborough University has been awarded five stars in the independent QS Stars University rating scheme, putting it among the best universities in the World. It is consistently ranked in the top twenty UK universities in the Times Higher Education's 'table of tables.' The Automotive courses at Loughborough were the first such courses in the UK and have established a national and international reputation for the quality of the courses and the graduates produced.

Courses:

Mechanical Engineering Automotive Engineering

FUNDING & INCENTIVES

Growing Places Fund

The Government's £730 million Growing Places Fund loan scheme supports key infrastructure projects designed to unlock wider economic growth, create jobs and build houses.

Horizon 2020

A €550 million European funding programme is currently available, as part of the EU's Horizon 2020 fund for researchers and business, which aims to ensure Europe produces world-class science and that barriers to innovation are removed.

Collaborate - Growing Business Together

Collaborate is targeted at small and medium sized enterprises (SME's) across Leicester and Leicestershire. Businesses can benefit from free, confidential and specialist advice and guidance, workshops, events and networks, and Collaborate Business Grants are also available to part fund capital investment.



VEHICLE MANUFACTURERS

- Royal Enfield
- Triumph Motorcycles
- Norton Motorcycles
- Noble Automotive
- Ultima Sports Ltd

MOTORSPORT

Mallory Park

An iconic motor sports venue nestled in the heart of the Leicestershire countryside, Mallory Park has a rich racing heritage and an adrenaline-fuelled future, with plans to revive motorsport memories spanning half a century with the return of bigtime events.

Set among tranquil lakes and rolling hills, Mallory Park's location also makes it a unique event venue, where delegates can arrive at their company conference as a sales rep and depart as a racing driver with a motorsport competition licence.

Donington Park

In the heart of England, Donington Park is one of the UK's most popular racing circuits and is avenue for exciting prestigious events such as The British Touring Car Championship, European Truck Racing and the SBK Superbike FIM World Championship.

MAJOR TIER 1 SUPPLIERS

- Trelleborg Industrial AVS
- BPW Ltd
- Syncreon
- Toyota Tsusho

CENTRES OF EXCELLENCE

MIRA Technology Park Enterprise Zone

MIRA Technology Park, located on the A5 near Hinckley, is a global provider of pioneering engineering, research, and test services to the automotive, defence, aerospace and rail sectors. It is a world class centre of excellence in transport technology set in an outstanding 842 acre campus environment. HORIBA MIRA works in close collaboration with vehicle manufacturers and suppliers around the world, providing comprehensive support ranging from individual product tests to turnkey engineering design, development and build programmes.

<u>Cenex (Centre for Excellence for Low Carbon and Fuel Cell technologies)</u>

Cenex was established in 2005 as the UK's first Centre of Excellence for Low Carbon and Fuel Cell technologies. Today Cenex operates as an independent not-for-profit consultancy specialising in the delivery of project, supporting innovation and associated energy infrastructure.

Advanced Structural Dynamics Evaluation Centre

Advanced Structural Dynamics Evaluation Centre (ASDEC) was launched in July 2014, and is an autonomous testing facility within the University of Leicester. Set up to make University level expertise available to industry, ASDEC is based at MIRA Technology Park - a growing hub of high-tech service providers in the automotive, defence, aerospace, and power generation industries. The ASDEC staff team are experienced engineers and executives from the industry. Having worked in businesses like those that ASDEC serves, they understand the needs and approach of their customers. They are supported in turn by their colleagues at the University, whose research work keeps ASDEC at the forefront of the field.

TRANSPORT INFRASTRUCTURE

Leicester and Leicestershire's central UK location and great connectivity to the M1 motorway and other national road, rail and air transport networks mean that the area is easily accessible from all major UK and European cities and regions.

Being located on the Midland Mainline makes Leicester a superb location for business or leisure travel, with fast rail links directly into London St Pancras in just 1 hour 10 minutes by train, with simple onward travel to the rest of Europe. The county also has a number of rail freight interchange sites.



The development of a joint rail strategy between the City and County Councils will be central to promoting the area as a national economic hub linked to London and other key cities. The two councils will also be working together to develop a Strategic Transport Plan to identify the priorities for highways and other transport infrastructure to support.

East Midlands Airport

East Midlands Airport accommodates more than 4 million passengers per year, servicing more than 80 routes worldwide. The airport is also the UK's busiest pure cargo airport and second only to Heathrow, handling over 300,000 tonnes of flown cargo every year.'

Contact Us

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MAKE IT STOKE ON TRENT & STAFFORDSHIRE

| Stoke-on-Trent Make it | & Staffordshire

MARKET OPPORTUNITY

Stoke-on-Trent and Staffordshire is home to many of the most respected names in manufacturing and offers outstanding opportunities for businesses to set up and grow. Significant growth in the automotive and power electronics industries, combined with proximity to global Original Equipment Manufacturers, puts the area at the heart of automotive and advanced manufacturing activities in the UK.

Stoke-on-Trent and Staffordshire is located within close proximity to a number of major car plants, including Jaguar Land Rover, Bentley, MG, General Motors and Toyota.

The UK's vehicle manufacturing capacity is predicted to grow to more than 2 million cars a year by 2017, creating further demand for components from UK-based suppliers.

AVAILABILITY & SKILLS OF WORKFORCE

Stoke-on-Trent and Staffordshire has twice the national average number of employees working in machinery manufacturing with particular expertise in engines, turbines, fluid power equipment and construction machinery.

LABOUR COSTS

Wage rates are typically 15% lower than the national average. The median average salary in Stoke-on-Trent was measured by the ONS for 2016 as £19,994 compared with a GB average of £23,177.

COST & AVAILABILITY OF PROPERTY

Industrial rent is typically 20% cheaper than competing industrial towns and cities. Stoke-on-Trent and Staffordshire is home to 2 distinct Enterprise Zones; Ceramic Valley and i54 South Staffordshire.

LOCAL SUPPLY CHAIN - AUTOMOTIVE

There are currently over 40 automotive companies within Stoke-on-Trent and Staffordshire. Additionally, due to the county's central location there are a number of OEM's including Bentley, Toyota, MG and General Motors within an hour's drive.

FE TRAINING PROVISION

There are a large number of FE facilities within the area with many running engineering and automotive related courses.

The <u>JCB Academy</u> is one of the UK's first UTC for Manufacturing and Engineering.

UNIVERSITIES & AUTOMOTIVE SPECIALISMS

Both <u>Staffordshire University</u> and <u>Keele University</u> are within Staffordshire which combined have over 31,000 students. Staffordshire University has a more automotive/engineering focus with courses both at a Bachelors and Masters level including:

- Automotive Engineering
- Automotive Technology
- Motorsport Technology
- Transport Design
- Mechanical Engineering
- Autosport Engineering

MAKE IT STOKE ON TRENT & STAFFORDSHIRE

Stoke-on-Trent Make it & Staffordshire

LOCAL BUSINESS NETWORKS

Staffordshire Manufacturers Forum

FUNDING INCENTIVES

Two Enterprise Zones offering a range of funding. Funding opportunities include:

- Grants for Growth
- Michelin Development Fund
- UK Steel Enterprise

Further details on these and other funding schemes can be found here.

CENTRES OF EXCELLENCE

Stoke-on-Trent and Staffordshire is a national centre for power electronics with a considerable base of global companies including GE, Siemens and ABB. As part of its claim to be the World Capital of Ceramics, Stoke-on-Trent has a large number of technical ceramics companies.

TRANSPORT INFRASTRUCTURE

Stoke-on-Trent and Staffordshire is in the heart of the country and benefits from outstanding transport links to the rest of the UK.

Motorways and major A Roads that are easily accessible in or from the area include the M6, M1, M40, M42 and A50. Rail links provide quick and easy access to cities throughout the UK.

Four airports including <u>Birmingham</u>, <u>East Midlands</u> and <u>Manchester Airport</u> with its World Freight Terminal are within an hour's drive of Stoke-on-Trent and Staffordshire.

The Port of Liverpool is an hour away and the South and East Coast Ports can be reached under four hours.

The railway stations in Stoke-on-Trent and Staffordshire provide fast and frequent services to the UK's cities. Almost every UK city could be visited for a day's business by rail with a return the same day.

VEHICLE MANUFACTURERS

- Jaguar Land Rover
- Zytek Automotive

MOTORSPORT

Glebe Engineering

MAJOR TIER 1 SUPPLIERS

- Michelin
- Johnson Controls
- Pirelli
- Magna Automotive
- Faurecia
- Autoneum
- Sumimoto Electric Wiring Systems
- Leoni Wiring Systems
- Gestamp Tallent Automotive

FURTHER INFORMATION

- Make it Stoke & Staffs website
- Stoke & Staffs Automotive & Advanced Manufacturing brochure

Contact Us

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THE MARCHES



AVAILABILITY & SKILLS OF WORKFORCE Marches Skills Programme Network

LABOUR COSTS

Competitive at 20% lower than national average

AUTOMOTIVE LOCAL SUPPLY CHAIN & MAJOR TIER 1 SUPPLIERS

- Magna
- Denso
- Mahle
- Stadco
- Midlands Alloy
- Jaguar Land Rover
- JCB
- GKN
- Axys
- Filtermist
- Polytec
- · Torus Automation
- Borgers Ltd
- Cobra Seats
- Grainger & Worrall Machining Ltd
- Ingimex Ltd
- Johnson Controls Ltd
- Acoustafoam
- BAE Land Systems

FE TRAINING PROVISION

Marches Centre of Manufacturing & Technology

UNIVERSITIES & AUTOMOTIVE SPECIALISMS

University of Wolverhampton

Courses:

- Automotive Engineering
- Mechanical Engineering
- · Mechatronics Engineering
- 3D Printing
- · Formula 3 Racing Team -
- Motorsport Engineering

TRANSPORT INFRASTRUCTURE

In the heart of the UK adjacent to the M654 motorway and only 10 minutes from the national network at junction 10a M6. As a new town Telford has a modern road network with little congestion and ample capacity.

Telford International Railfreight Park at the heart of Telford's industrial and development land has excellent links to the highway network and to all national ports.

VEHICLE MANUFACTURERS

BAE systems

MOTORSPORT

Wolverhampton University £10million investment on the Telford Innovation Campus including: design and visualisation facility, wind tunnels, engine test facilities, 3D printing facilities, and laboratories dedicated to electronics and telecommunications, metrology and materials testing

OTHER

Major inward success in recent years Main drivers of this are:

- 1. Setup costs are lowest in England
- 2. Costs of Operation are low
- 3. Skills are available

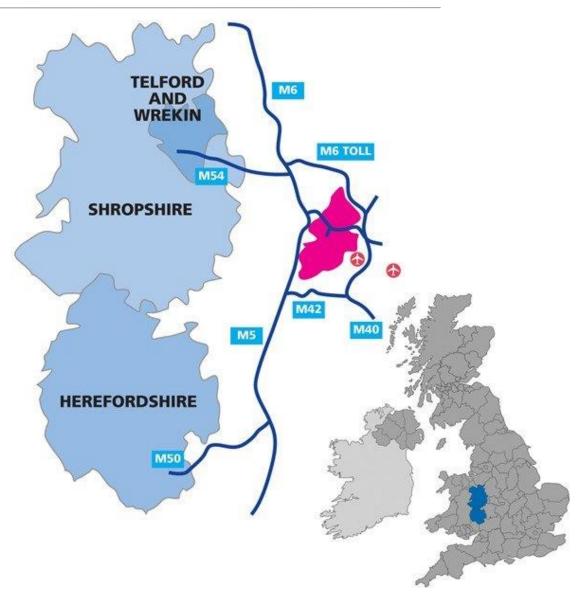
FUNDING & INCENTIVES

- Business Development Programme
- Business Innovation Programme
- Funding Circle
- Green Bridge Supply Change Programme
- Green Shoots Plus Fund
- HS2 Supply Chain Programme
- Impetus Small Business Loan Fund
- Angels Den
- Assetz Capital
- Better Business Finance
- The Carbon Trust Green Business Fund
- More

BUSINESS NETWORKS

- Goldman Sachs 10,000 Small Businesses programme
- Meres & Mosses Business Environment Network (MMBEN)
- Rural Hub Partnership
- Knowledge Exchange & Enterprise Network (KEEN)
- Business Interfacing Graduates scheme (BiG)





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WORCESTERSHIRE



MARKET OPPORTUNITY

Growing businesses need space to expand and Worcestershire has identified a number of 'gamechanger' sites that are the focus of investment and development activity - these are Malvern Hills Science Park; Redditch Eastern Gateway; South Kidderminster Enterprise Park; and Worcester Six. These strategic sites will suit a range of occupiers from manufacturing and technology companies to office-based projects. Additional strategic employment sites, industrial estates and technology parks have been identified across the county which are located adjacent to major transport corridors and are close to Worcestershire's main towns.

AVAILABILITY & SKILLS OF WORKFORCE

Manufacturing employment is particularly strong in the Worcestershire catchment area with proportionately more employees here than the regional or national average.

Over 911,000 people live in Worcester's recruitment catchment of which 62% are of working age. There are proportionately more young employees in the Worcestershire catchment than at regional and national level. Many of these positions are highly skilled engineering roles, high-tech manufacturing, ICT manufacturing, electronics and aerospace activities with four times the regional average and double the national figure when it comes to proportion of people in high-tech manufacturing jobs in the area with proportionately more employees in Worcester than in the West Midlands or England.

Over two in five manufacturing jobs are in machine manufacturing and engineering, over 11% above the region and close to twice national average. Many of these positions are highly skilled engineering roles, high-tech manufacturing, ICT manufacturing, electronics and aerospace activities where they exceed regional and national average.

Worcester boasts a highly skilled workforce with proportionately more senior managers and officials, professionals and semi-professional staff than reported throughout the West Midlands and England.

The automotive industry is heavily reliant on engineering skills and Worcestershire has a very strong engineering heritage as its backbone.

The typical 'Journey To Work Area' for Worcester, based on peak commuting periods, includes a rich talent pool of people from Birmingham in the north, Warwick in the east and south to Gloucester. More than 911,000 people live in Worcester's recruitment catchment of which 62% are of working age but it's the quality of the workforce which stands out.

Within the local catchment area, there is a notably high proportion of people working in high-technology manufacturing roles. These job types make up 15.7% of all manufacturing activity and are four times higher than the regional average and twice as high as the national figure.

SKILLS

Worcestershire has a higher proportion of manufacturing employees than the regional or national average. Many of these positions are highly skilled engineering roles, high-tech manufacturing, ICT manufacturing, electronics and aerospace activities with four times the regional average and double the national figure when it comes to proportion of people in high-tech manufacturing jobs.

WORCESTERSHIRE



Worcestershire offers expanding companies a pool of existing skills together with a pipeline of high-achieving young people. School attainment results in the catchment consistently outperform both the region and national picture; with A level scores being a notable 24 points above the West Midlands and 20 points above the national averages. The 172,350 students that attend the ten universities within an hour's drive of Worcester presents firms with a great pool of talent. With ten universities within one hour's drive this offers lots of opportunity to attract graduates with engineering skills and to engage in collaborative R&D activity.

Local colleges such as <u>Heart of Worcestershire</u> <u>College</u> offer engineering and manufacturing courses developed alongside key local companies like Yamazaki Mazak and Aeromet.

Our pay rates are competitive too: average hourly rate for Worcestershire residents is £12.40 compared to the national average of £13.15, a saving of almost 6%.

FE TRAINING PROVISION

Invest in Worcestershire can provided key links with employer led and membership based organisations providing tailored packages of workforce development to meet inventors needs including:

- Pathways to Qualifications
- Pathways to staff development and standards
- Strategic plans towards Investment strategies
- Align skills and provide bottom line return on investment.

Heart of Worcestershire College

UNIVERSITIES & SPECIALISMS

- University of Worcestershire
- Midland Group Training Services
- Herefordshire & Worcestershire Group Training Association

TRANSPORT INFRASTRUCTURE

Worcestershire offers manufacturers greater connectivity to customers and suppliers. In terms of customer-base, more than 50 million people from Cornwall to Cumbria can be reached within a 3 hour drivetime, as can all major deep-sea ports. Access to the major automotive facilities at Bristol Port is less than an hour away. There are 11 railfreight terminals within an hour of Worcestershire including those at Hams Hall, Birch Coppice, Daventry, Rugby, Telford and Bicester. For more information click here.

SUPPLY CHAIN OPPORTUNITIES

At the heart of the UK's growing supply-chains in automotive, aerospace and advanced materials, Worcestershire is home to major manufacturers here including Yamazaki Mazak; Bosch Thermotechnology, Morgan Motor Company and the global headquarters of global engineering group GKN. We're part of the West Midlands automotive cluster that includes Jaguar Land Rover, SAIC, BMW and Aston Martin; and an aerospace region that Rolls-Royce in Derby and Meggitt, Moog and UTC.

COST & AVAILABILITY OF PROPERTY

Growing businesses need space to expand and Worcestershire has identified a number of 'gamechanger' sites that are the focus of investment and development activity - these are Malvern Hills Science Park; Redditch Eastern Gateway; South Kidderminster Enterprise Park; and Worcester Technology Park (Worcester Six). These strategic sites will suit a range of occupiers from manufacturing and technology companies to office-based projects.

Additional strategic employment sites, industrial estates and technology parks have been identified across the county which are located adjacent to major transport corridors and are close to Worcestershire's main towns.

WORCESTERSHIRE



LOCAL BUSINESS NETWORKS Worcestershire Business Central

LOCAL SUPPLY CHAIN - AUTOMOTIVE

Worcestershire sits at the heart of many growing automotive supply-chains making it the ideal location to maximise current and future opportunities in the automotive sector. A vibrant mix of home-grown and international companies have created a diverse and fertile business environment where ideas and innovations flourish. Our neighbouring locations put us in easy reach of many more supply-chain opportunities, whether it's the West Midlands automotive cluster that includes Jaguar Land Rover, SAIC, BMW and Aston Martin.

The major companies that have established manufacturing facilities in Worcestershire include:

Yamazaki Mazak

The world's leading CNC machine tool manufacturer based in Japan. European manufacturing site in Worcester was opened in 1987. The company is a key partner of the McLaren F1 team and has a client base from autosport to nuclear with major clients such as Siemens.

GKN

The global headquarters of the tier 1 automotive and aerospace engineering supplier is in Redditch. The group employs more than 47,000 people worldwide in its various divisions.

Bosch Thermotechnology (Worcester Bosch)

The German-owned industrial leader in heating and hot water products has a major presence and long association with Worcester.

Morgan Motor Company

The iconic British sports car brand has been made for over 100 years in the beautiful spa town of Malvern. Morgan cars are famous the world over for their unique blend of charisma, quality materials, craftsmanship and performance.

KOITO Europe

Japanese automotive electrical supplier is in Droitwich.

FUNDING & INCENTIVES

Across Worcestershire, a partnership of local agencies is committed to supporting business growth. A range of tailored business support can help you to grow or locate your business. This includes grants, for example, to assist with supply-chain development, low carbon initiatives and redundant buildings; as well as national schemes like Regional Growth Fund and Growing Places Fund. For more information please click here

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Find out more about Drive Midlands can help you with your automotive investment plans in the Midlands UK

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