

## The UK automotive ecosystem – vibrant, world-leading, innovative.

150,000

people working directly  
in automotive  
manufacturing

£78bn

turnover for the UK  
automotive industry

14+

Major vehicle  
production facilities

£2.5bn+

of government  
investment into  
batteries, motors and  
CAVs

£80m

for the 'Driving the  
Electric Revolution'  
programme

The UK is at the cutting-edge of electric vehicle technology with a thriving world-class automotive industry. Combining global **motorsport leadership and a highly advanced R&D ecosystem**. It is home to some of the most sophisticated and successful vehicle manufacturers in the world.

The **Midlands region** forms the very heart of the UK automotive industry. It is the **fastest growing regional economy outside London and the South East**.

Businesses take advantage of the region's **central UK location and international connectivity, high performing universities and a young population driving the need for housing and leisure**.

The **Economic Partnership Initiative** agreed by the Federal State of Baden-Württemberg and the United Kingdom on 30<sup>th</sup> September 2020 has Future Mobility as a core theme/focus.

### Pioneering research

The UK's innovation and technological capabilities set it apart from its competitors. Clients are in pole position to capitalise on the three major global automotive trends of **zero emission vehicles, lightweighting and Connected and Automated Mobility (CAM)**.

### Strong supply chain

The UK has 14 major vehicle production facilities, 2,500 component providers and 18 of the top 20 Tier 1 automotive suppliers.

### Motorsport

The UK has the world's most advanced motorsport industry, with 80% of the world's top motorsport engineers and designers. **Motorsport Valley** is the world's leading cluster for motorsport technology and is the home of Formula E and the leading international supplier to racing series around the world.

### Leaders in technological advancements

It is not only UK-built cars, which are in popular demand; the UK is at the cutting-edge of the technologies needed to underpin the vehicles of tomorrow. In **Oxford Insights Government AI Readiness Index 2019**, the UK ranked **2<sup>nd</sup>** for preparedness to capitalise on AI technologies in public services (topped only by Singapore).

Backed by the government, industry and researchers develop next-generation AI and control systems for connected and automated vehicles (CAV). The Centre for Connected and Autonomous Vehicles (CCAV) has committed to invest over £250m in public funding, matched by industry, into R&D and developing testbed infrastructure to accelerate the development of CAV.

### Talent and Skills

As the home of 4 of the top 10 universities in the world, the UK is a magnet for the highest calibre researchers in AI and related disciplines. **AI Skills and Talent Package** is a part of the Government's

Industrial Strategy's AI sector deal and is backed by industry funding and up to £110m government investment. There are currently 75 institutions and ~150 programmes in the UK offering Masters degrees in AI.

The **Midlands region** alone is hosting 12,000 specialist tech companies in the region of which 3,700 are tech start-ups and scale-ups in operation.

The demand for higher level tech skills is supported by the Region's universities increasing their data science/ tech related courses; in 2019/20 the Region saw approx. 21,000 graduates in physical/mathematical science, computer science and engineering/technology disciplines.

To further support businesses to respond to the tech/ digital revolution the West Midlands Combined Authority has created the [Digital Skills Partnership](#), bringing together tech firms, entrepreneurs, local partnerships.

### **Cyber Security**

Cyber security is fundamental to the successful deployment of CAM. The Government invested £1.2m to develop CAM cyber security testing capability. **Ranked number one in the world for cyber security in KPMG's 2020 Autonomous Vehicles Readiness Index**, the UK is well-positioned to lead the world in ensuring that CAM can be deployed safely and securely.

In the **Midlands**, the University of Birmingham is an Academic Centre of Excellence in Cyber-Security.

### **Snapshot: Connected and Automated Mobility (CAM)**

The UK is at the forefront of the development and deployment of CAM innovation and technology, solving issues relating to fundamental connected and automated mobility technologies, control systems, software and services. CAM technologies will be boosted by the UK's Plan for Growth, which sets out government's plans to **support growth through significant investment in infrastructure, skills and innovation.**

At the core of the UK's offer is CAM Testbed UK, a comprehensive and coordinated set of **six world-leading facilities** for the modelling, simulation, testing and development of connected and automated mobility solutions. The region has the **highest concentration of automotive engineers anywhere in the UK**. Three out of the six testing facilities are located in the **Midlands**. **Coventry-Warwickshire Motor City** is the UK's largest cluster of automotive R&D and more OEMs than Nagoya or Stuttgart.

There are multiple industry bodies in the UK supporting and promoting modelling and simulation companies, including [Zenzic](#) (CAM Testbed UK coordinator), [Connected Places Catapult](#) (CPC), [Centre for Connected and Autonomous Vehicles](#) (CCAV), [Innovate UK](#) and [Knowledge Transfer Network](#) (KTN).

Member companies (CAM) include Claytex, Hexagon, TotalSim, Altair, MSC Software and Wirth Research, amongst others.

### **Midlands Engine**

The Midlands is the **fastest growing regional economy outside London and the South East.**

Businesses take advantage of the region's **central UK location and international connectivity, as well as high performing universities.**

Sports, volume and premium car manufacturers, commercial vehicle manufacturers and off-highway manufacturers are all located in the Midlands (e.g. Toyota, BMW, Dennis Eagle, JLR, Aston Martin, Triumph, SAIC, Changan, LEVC, and Morgan). **35 of the global Top 50 Tier 1 suppliers are located in the Midlands** and are supported by **over 1,300 supply chain companies in the region.**

As well as manufacturing, the Midlands is a world class centre of automotive R&D with universities, centres of excellence and industry leading organisations.

### **Digital infrastructure**

In 2018 the West Midlands was selected to **become the innovative home to the UK's first multi-city 5G testbed**. Digital infrastructure will gain momentum over the next few years, influencing digital construction and enabling the further development of Smart Cities.

### **Department for International Trade (DIT)**

The UK's Department for International Trade (DIT) promotes UK trade across the world and attracts foreign investment to our economy. We are a specialised government body responsible for supporting business as well as delivering an outward-looking trade diplomacy strategy.

The DIT Germany Mobility Team based in the Consulate-General in Munich and the British Embassy in Berlin offers tailored support in the area of future mobility:

- Support UK companies, SMEs and Start-Ups with entering the German market and getting in touch with German stakeholders and OEMs
- Working with German companies to support in building a footprint in the UK
- Provide market and policy information on the British and German Mobility Market.

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