

The UK Automotive Industry and the EU

An economic assessment of
the interaction of the UK's
Automotive Industry with
the European Union

April 2014

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Introduction

by Mike Hawes

Europe is fundamental to the current and future success of the UK automotive industry

This report examines the evidence why, for UK automotive businesses large and small, it is critical that the UK has a strong relationship with Europe.

In recent years, the UK has benefited from significant investments by many of the world's major vehicle manufacturers including BMW Group, Ford, Vauxhall, Jaguar Land Rover, Nissan and Toyota. This attests to the global nature and dynamism of this sector. The optimism that exists, however, is not limited to major manufacturers. The supply chain that feeds into these Original Equipment Manufacturers (OEMs) is also seeing demand increase with significant growth opportunities, helping the wider industry recover after a difficult few years.

This recent success of the automotive sector has been significant in the UK's recovery with thousands of jobs created. Automotive accounts for 10% of the UK's trade in goods, suppliers add £4.8 billion in added value and the sector as a whole turned over £60.5 billion last year. The sector is vital to the UK economy, so given the debate surrounding the UK's membership of the EU, it is right that it should attempt to examine its relationship with Europe.

To provide the evidence to enable an industry view, we commissioned KPMG in the UK to undertake an independent study, looking at how the UK automotive industry currently operates within the EU, and to assess the benefits and challenges that it presents.

The report gives a fact-based account of the sector and provides some telling insights:

- The attractiveness of the UK as a place to invest and do automotive business is clearly underpinned by the UK's influential membership of the EU.
- Access to the Single Market is fundamental for securing investment into UK vehicle and engine manufacturing and across a highly integrated supply chain.
- Access to the EU market is reflected in the fact that 49% of UK-produced vehicles are sold across the largest Single Market in the world, unhindered by any tariffs or costly regulatory barriers.
- The EU's bargaining power in trade negotiations around the world is immense; paving the way for the UK to export over 50% of locally-manufactured vehicles to growth markets across the rest of the world.
- Defining technical regulations and product standards at a European level enables the UK to remove complexity and costs and influence the way vehicles are made around the globe.
- Innovation in UK automotive is boosted by significant EU R&D funding. In total approximately £3.5 billion has been awarded to UK businesses and universities across all sectors to encourage growth.
- Free movement of labour within European borders gives automotive businesses the ability to blend UK and international talent at all levels of the industry.

To supplement this report, we asked SMMT members for their views on the UK's EU membership. Their verdict is clear. 92% of automotive companies said it was more beneficial to their business for the UK to stay in the EU, the majority with reform. Senior automotive executives from all parts of the industry see the EU as beneficial to their business and warn of a risk to investment in the medium and long-term, if the UK were to leave the EU.

But there is also a clear call by UK automotive for the EU to reform and better support the competitiveness and growth of the sector in key areas such as regulation. To maximise the growth opportunities and benefits to UK automotive businesses, this reform must be pursued.

These are just some of the important insights and views that KPMG outline in the following pages. The report should help to explain how and why the UK should continue to play its part in a reformed Europe.

I would like to thank all of those who have contributed to this report: vehicle manufacturers; Tier 1 and Tier 2 suppliers; and many colleagues within SMMT. Your help and support have been critical in delivering this important and timely report.

With our position now clear, I am confident that the UK automotive sector can help make the case for a strong UK voice in Europe, ensuring our sector can continue its growth, generating more high value and highly-skilled jobs and attracting future investment.



Mike Hawes

Chief Executive, SMMT



About this report

This report is an independent study commissioned by the SMMT on how the UK automotive industry currently operates within the EU and the benefits and challenges that EU membership presents.

Our fieldwork, which commenced on 18 December 2013 and was completed on 18 March 2014, comprised the following:

- Twenty interviews with UK and global management of automotive manufacturers and their suppliers
- Desktop research and analysis of:
 - Publicly available information relevant to the objective of the study,
 - Non-public information including vehicle sales and production forecasts by LMC Automotive and AutoAnalysis and information received from SMMT, certain automotive manufacturers and their suppliers
- Review of the results of a SMMT member survey conducted separately by the SMMT between January and February 2014.

For clarity, this study is based on the current market structure and does not include considerations or projections of scenarios of the UK exiting or staying in the EU.



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An important part of the UK economy

Introduction

The automotive industry accounts for 4% of GDP (£60.5 billion) and currently provides employment for more than 700,000 people in the UK⁽¹⁾

The UK produced 1.6 million cars and commercial vehicles and almost 2.6 million engines in 2013. The UK is now the second largest vehicle market and fourth largest vehicle manufacturer in the EU. It is also the second largest premium vehicle manufacturer after Germany⁽¹⁾⁽²⁾.

77% of vehicles produced in 2013 were exported⁽²⁾. The average value of vehicles imported in 2013 was approximately £13,000 compared to an average of £20,600 for vehicles exported, meaning that the balance of trade for vehicles is £70 million net export⁽³⁾. Automotive is one of the largest export sectors in the UK, accounting for 10% of total UK export in goods.

Productivity has increased considerably with average gross value added (GVA) per job in the sector up from an average of £40,000 in the late 1990s to an average of over £75,000 between 2010 and 2013^{(a)(3)}. According to Eurostat data, the UK now has the most productive automotive sector in the EU, in terms of GVA per job⁽⁴⁾.

There are over 2,350 companies in the UK operating in the automotive sector, of which the majority are SMEs in the supply chain and aftermarket.

The UK benefits from a diverse mix of luxury, premium, volume and commercial vehicle manufacturers and suppliers, and is also home to eight F1 teams. The UK is the fourth largest global manufacturer of construction equipment (off-highway vehicles), producing approximately 60,000 units per year.

Many of these companies are continuing to invest in the UK, with over £6 billion investment announced in the last three years.

UK-manufactured vehicles and engines have received domestic and international recognition of their high quality

Some recent examples include:

- Range Rover: Won 10 awards within three months of commencing production, and the Evoque has secured 22 international awards.
- Nissan Qashqai: Winner of over 13 global awards.
- MINI: The 12th successive year to be awarded Supermini winner at the BusinessCar Awards 2014.
- McLaren: Winner of Best Super Car at the Middle East Motor Awards 2013.
- Nissan LEAF: European and World Car of the Year in 2011 alongside 2012 Car of the Year Japan.
- Ford EcoBoost engine: International Engine of the Year 2012 and 2013 and SMMT Award for Automotive Innovation 2013.

Recent inward investment driven by access to EU market

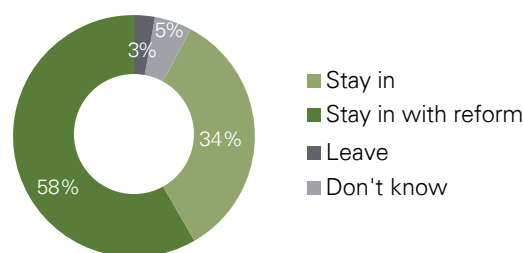
Much of the recent investment by car manufacturers is in new vehicles which will be predominantly for sale to the EU market.

The investments made by the vehicle manufacturers are now being followed by suppliers. This investment is not keeping up with the opportunities being created by growing vehicle production. The Automotive Council identified a £3.3 billion supply chain opportunity for UK suppliers in 2012, and KPMG believe that this opportunity is likely to have grown to approximately £9 billion today. This is raising expectations for further investment and employment growth.

UK's membership of the EU should, therefore, be viewed in the context of a growing automotive industry for which the EU is the most important trading partner

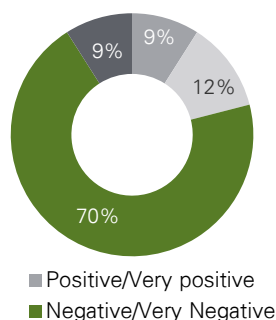
SMMT 2014 Member Survey^(b)

If there was a referendum on the UK's continued membership of the EU tomorrow, what result would be best for your business?

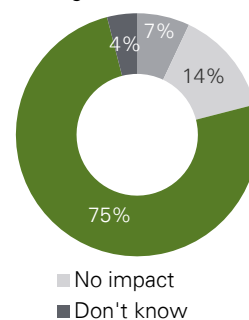


What would the impact be on your business and on foreign investment in the UK businesses if the UK left the EU?

Medium-Long term impact on business



Impact on size and diversity of foreign investment in UK



“We are on a growth path. EU uncertainty puts this at risk.”

Chief Executive, Tier 1 supplier⁽⁵⁾

Notes: (a) UK automotive manufacturing (Div 29 SIC 2007). Real gross value added at constant 2010 prices and implies a compounded average annual growth rate of 2.5%
(b) Based on a survey of SMMT members conducted separately by SMMT between Jan to Feb 2014

Sources: (1) Department for Business, Innovation and Skills (BIS), Automotive Industry Report, Feb 2014
(2) Motor Industry Facts 2014, SMMT
(3) KPMG analysis of ONS data
(4) Eurostat, accessed on 17 March 2014
(5) KPMG interview programme

A diverse mix of manufacturers across the UK

Figure 1. Key vehicle and engine manufacturing locations in the UK^{(1)(a)}

Cars and commercial vehicle OEM and engine manufacturing locations
An extensive and diverse regional base

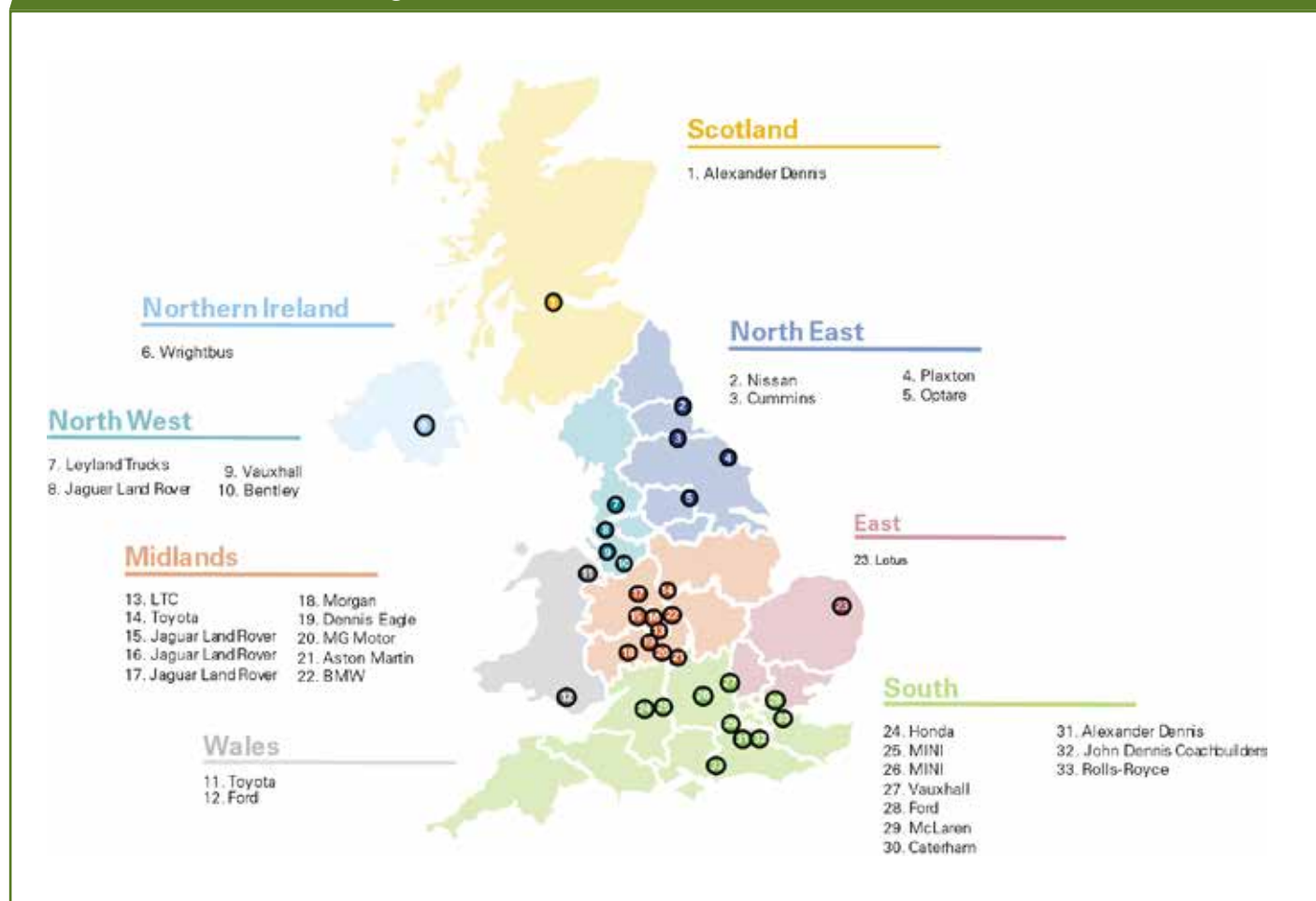


Figure 2. Selection of recently announced OEM and supplier investments in the UK^{(1)(a)}

<p>Jan 2014 Rolls-Royce announces an additional 100 jobs at its Goodwood manufacturing plant</p>	<p>Jul 2013 BMW Group confirms additional £760 million investment in its UK manufacturing operations to 2015</p>	<p>May 2013 Vauxhall confirm £125 million investment to build the new Astra</p>	<p>Feb 2013 Brose confirms a £15 million investment in its Coventry facility</p>
<p>Oct 2013 Cosworth £30 million investment in a new manufacturing facility</p>	<p>Jul 2013 Bentley to invest £800 million for its new SUV creating 1,000 new jobs in Crewe</p>	<p>May 2013 Ford confirms a £189 million investment in its high tech engine facilities</p>	<p>Jan 2013 TRW announced £15 million investment at its Sunderland facility</p>
<p>Sep and Mar 2013 Jaguar Land Rover to invest a total of £2.0 billion creating over 3,000 jobs</p>	<p>May 2013 BorgWarner announced £15 million investment at its Bradford facility</p>	<p>Mar/Apr 2013 Toyota announced 70 new jobs at its Deeside plant in North Wales</p>	<p>Dec 2012 Nissan announces a £250 million investment in its Sunderland plant for the Infiniti model</p>

Note: (a) Not exhaustive
Source: (1) SMMT

1 UK Automotive Snapshot

Expected to grow throughout this decade

It takes many years to design and launch new vehicles. Therefore, the industry has production plans in place into the next decade which provide visibility and confidence in its development

The sector output in the UK has grown steadily since 2009 and vehicle production is forecast to increase from 1.6 million vehicles in 2013 to over 2.0 million in 2017, a record level of output⁽¹⁾.

Recent investment announcements, which effectively secure the production of models in UK factories in the medium-term, support the continued growth of the sector. New vehicles include:

- New MINI (November 2013).
- New Nissan Qashqai (January 2014).
- New Vauxhall Astra (2015).
- Announcements of plans for multiple new models, a new aluminium vehicle line at Solihull and engine plant in Staffordshire for Jaguar Land Rover.
- New models for the luxury manufacturers: Aston Martin, Bentley, Infiniti, McLaren, Rolls-Royce.

Furthermore, there has been significant investment in automotive R&D, increasing from 5.3% of total UK R&D in 2006 to 10.1% in 2012, equivalent to £1.7 billion of R&D spend⁽²⁾.

The combination of OEM investment, R&D expenditure and the support of the UK Government through funding initiatives such as the Regional Growth Fund and Advanced Manufacturing Supply Chain Initiative is expected to increase employment.

Access to high growth markets as well as the large EU market is key for the UK automotive sector

Sales to emerging markets are growing. UK automotive exports to China, for example, have increased more than six-fold between 2008 and 2013. This has led to some arguments that the UK government should focus on the emerging economies rather than the EU for future trading links.

However, for volume manufacturers in the UK such as Honda, Nissan, Toyota, and Vauxhall, the majority of exports are to the rest of the EU. For premium manufacturers such as BMW Group and Jaguar Land Rover, approximately 40% of their vehicles are sold within the EU with the rest sold in non-EU markets ⁽³⁾⁽⁴⁾.

The EU market, therefore, will remain key for UK automotive manufacturers.

The EU automotive market is recovering and is expected to remain the largest automotive market for the UK

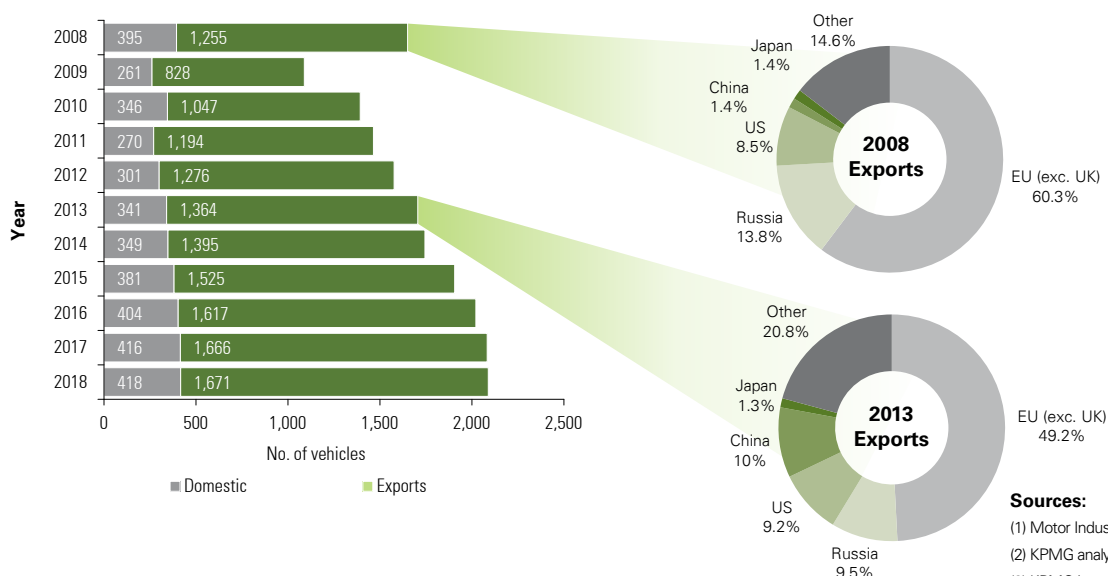
The EU market is recovering with EU vehicle registrations expected to increase from approximately 10.7 million in 2013 to almost 13.5 million by 2018 (exc. UK)⁽⁴⁾.

Longer term, the EU is in dialogue with a number of candidate countries for potential membership as well as with neighbouring regions on economic partnerships, which would further increase the size of the Single Market.

This report explores the relationship between the UK and the EU, alongside examining the key interactions of the UK automotive industry under the following topics:

- Access to the EU market
- International trade
- EU regulatory developments
- Driving innovative change
- People and skills

Figure 3. UK automobile manufacturing output and export destination, 2008 to 2018⁽¹⁾



Sources:

- (1) Motor Industry Facts 2014, SMMT
- (2) KPMG analysis of ONS data
- (3) KPMG interviews with SMMT members
- (4) LMC Automotive Quarter 4, 2013 Global Car and Truck



Important to UK manufacturers

Introduction

The automotive industry is highly globalised and integrated within the EU

The majority of the large, global volume car manufacturers have organised their R&D and production to serve the major markets of the US, EU, China and Japan.

These manufacturers have created a network of production plants local to these markets. New models (and associated investment in capacity and jobs) are awarded to competing plants within their regional network based on the total delivered vehicle cost to the market.

The EU is the world's largest trading bloc with over 500 million inhabitants and therefore access to the EU is key to these manufacturers.

To illustrate this point, Nissan manufactured over 500,000 cars at its Sunderland plant in 2013. 19% of production was sold domestically in the UK, 71% was exported to the rest of Europe (including Russia) and 10% exported to the rest of the world⁽¹⁾.

Over 70% of the total number of Nissan cars sold in Europe (excluding UK) came from the Sunderland plant^(a). A similar proportion of production destined for the EU market can be seen at Honda, Toyota and Vauxhall.

“We build cars for Europe in the UK.”

Chief Planning Officer, Nissan⁽²⁾

“The UK is not seen as a standalone business – it is part of our European footprint.”

UK Tier 1 Supplier⁽²⁾

**SMMT 2014
Member
Survey**

78% of respondents said the UK leaving the EU would have a negative or very negative impact on ability to access EU automotive markets to sell and source products and services.

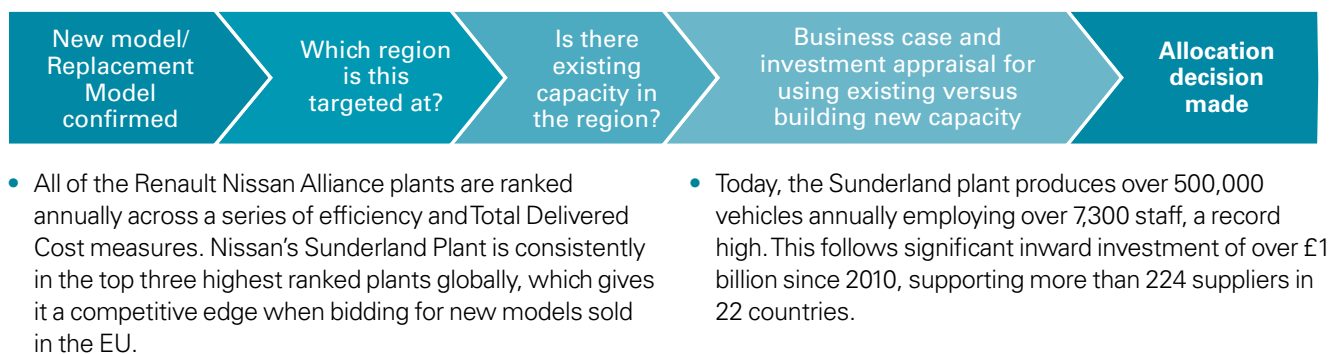
Case study

Nissan's Investment Decision Framework

Plants within the Renault Nissan Alliance compete for new model allocation based on efficiency and cost competitiveness.

- In Europe, Nissan's Sunderland plant has to compete with other Renault plants in France and Spain as well as other Nissan facilities in order to secure future model allocation.
- Allocation of production of new/replacement models to plants is done through a competitive process whereby plants have to submit business cases to Nissan's 'New Plant Steering Committee'. The final allocation decision is based on economic grounds.

Nissan's decision framework.



Note: (a) According to LMC Automotive Quarter 4, 2013 Global Car and Truck Forecast data, approximately 487,521 Nissan cars were sold in Europe (excluding the UK) in 2013

Sources: (1) Nissan: Helping To Drive The UK Economy, KPMG interview with Nissan
(2) KPMG interview programme

Important to the supply chain

Suppliers follow OEM investment decisions which effectively define the supply chain geography

Tier 1 suppliers often cluster their assembly plants close to their OEM customers' production plants, in order to manage short-term fluctuations in demand and meet customer requirements better. These Tier 1 suppliers and their own Tier 2 suppliers typically manufacture components within the region.

This is illustrated by the increase in investment by suppliers to Jaguar Land Rover following its announcement to set up a new engine factory in Wolverhampton. For example, BorgWarner, a US supplier of turbocharging systems, announced in 2013 plans to set up a manufacturing capability in Bradford to produce turbochargers that will be supplied to Jaguar Land Rover's engine factory. Additionally, BorgWarner has developed an alliance with the University of Huddersfield by establishing a masters programme in turbocharger engineering.

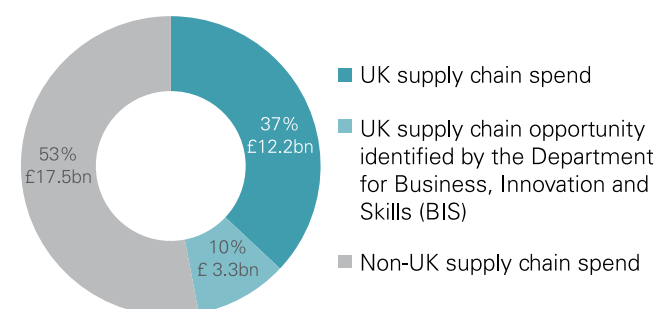
Therefore, it follows that if access to the EU is important for OEMs then it is also important to their suppliers.

Less than 40% of the total spend in the UK supply chain is currently sourced locally indicating a reliance on international suppliers, the majority of which are within the EU

In the UK, 37% of the total value of spend in the supply chain (£33 billion in 2012) is currently sourced locally. Depending on the manufacturer, between 20-50% is imported from the EU and the rest from outside the EU.

As illustrated by figure 4, there is a substantial opportunity for UK suppliers to grow at present, but other EU suppliers will continue to be important for UK vehicle manufacturers for the foreseeable future.

Figure 4. UK Automotive Supply Chain spend (2012: £33 billion)⁽¹⁾



“Sourcing is driven by economics. We directly source 35% of the components from the EU and this is probably much higher if we include our suppliers.”

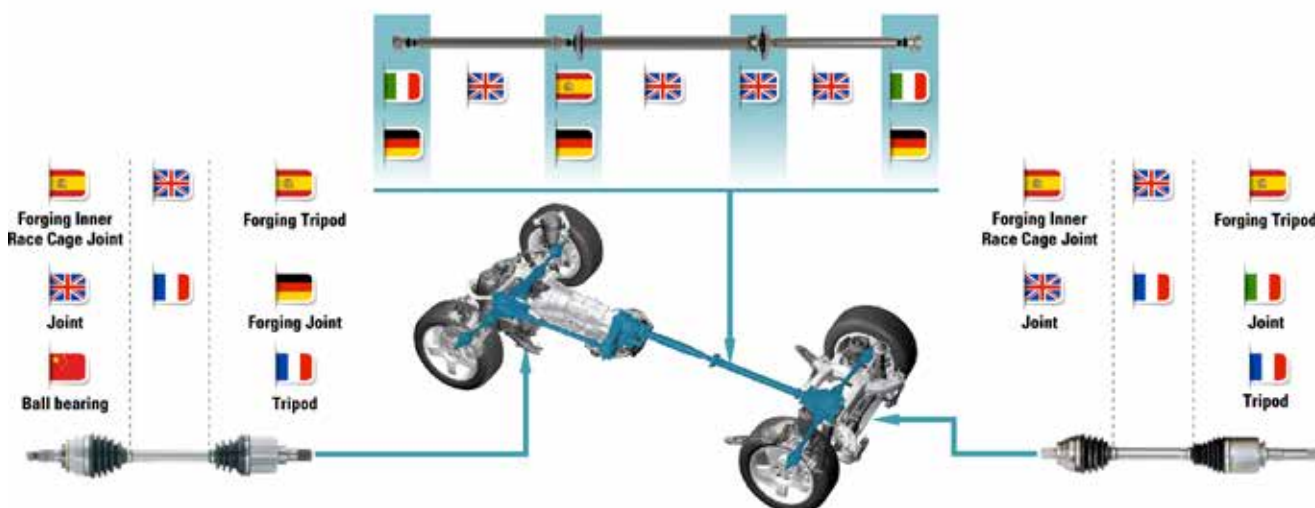
Executive VP, Global OEM⁽²⁾

Case study

GKN Driveline – Illustration of an integrated supply chain

A typical driveline system produced by GKN incorporates specialist parts largely from the rest of the EU.

GKN sources specialist forged parts from Spain, Italy, France and Germany which are then assembled at GKN Driveline's factory in the UK and supplied to UK and EU OEMs.



Sources: (1) KPMG "Capturing opportunity" September 2012

(2) KPMG interview programme

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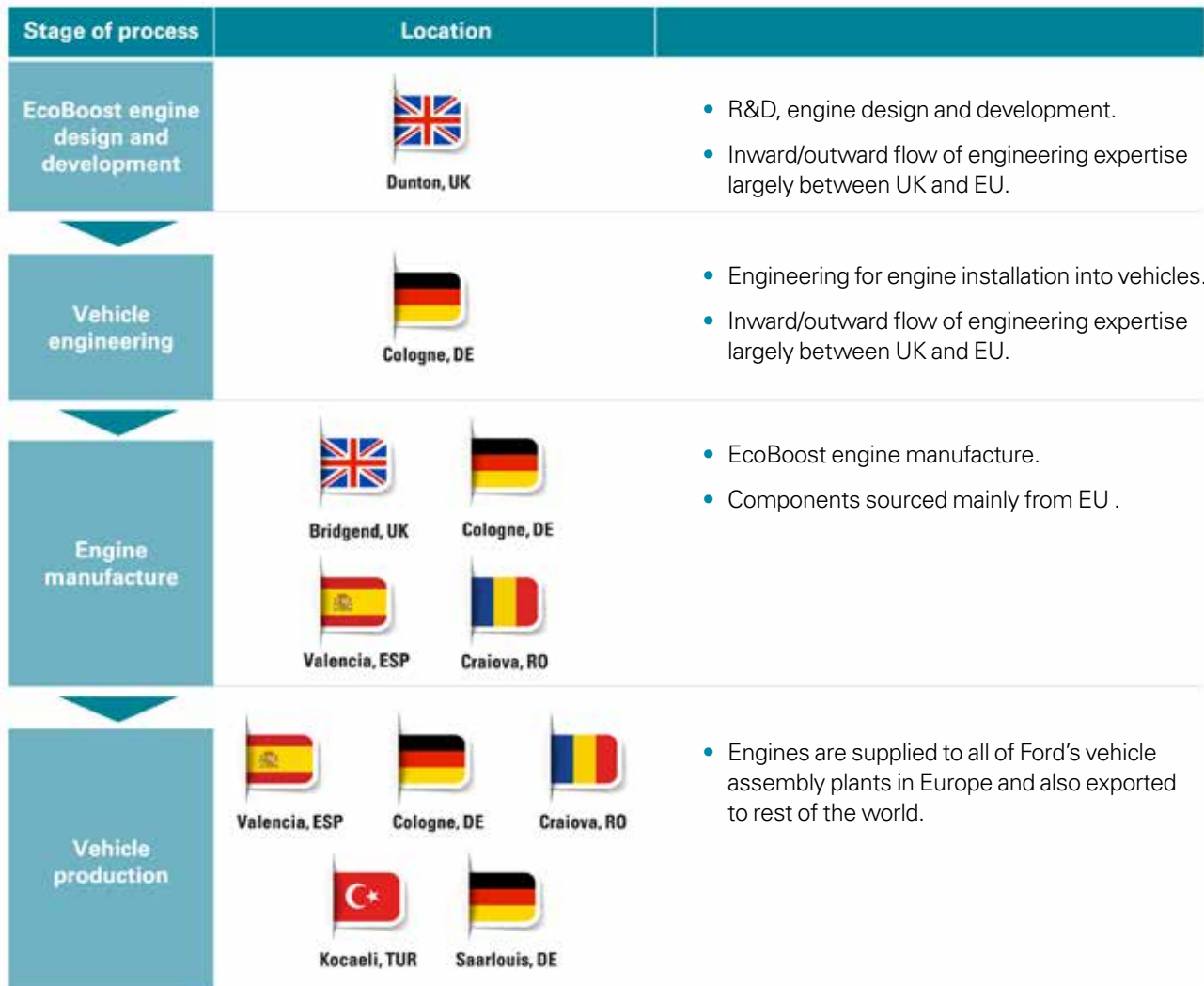
Important for R&D collaboration

Case study

Pan-European Ford EcoBoost engine development and manufacturing process

Ford's operations in the UK are part of an interconnected and interdependent supply chain network across Europe and the world.

- Ford has structured its operations in Europe into capability centres with each centre integrated with each other as part of the global vehicle development and production process.
- Ford in the UK manufactures approximately 1.5 million engines, with Dagenham supplying diesel engines for all of Ford in Europe.
- The development, manufacturing and assembly of Ford EcoBoost engines showcases this interconnectivity as set out below across five different countries (Germany, Romania, Spain, Turkey and UK). A similar pattern of integration can also be seen in the design of new vehicles and components with R&D centres from around the world collaborating on a new product.



“We see Europe as a Single Market and we spread our capabilities across the region.”

Ford⁽¹⁾

Source: (1) KPMG interview programme



Benefits of the EU's scale in trade negotiations

Introduction

There are significant trade opportunities with non-EU markets which are best realised by being part of the large EU negotiating bloc

The UK exports vehicles to more than 100 countries worldwide.

50.8% of UK export vehicles were destined for outside of Europe in 2013, compared to 40.7% in 2008⁽¹⁾. China was the largest non-EU export destination, accounting for 10% of exports, followed by Russia (9.5%) and the USA (9.2%).

The UK produced 1.6 million vehicles in 2013⁽¹⁾, and is the fourth largest vehicle manufacturer in the EU, but does not have the critical mass to negotiate trade deals as effectively as the EU. Being part of the EU, therefore, enhances the negotiating strength of the UK.

Figure 5 highlights the automotive related trade flows between the UK and the rest of the world. The EU remains the largest trading partner in value, followed by North America, but it is the other markets that are demonstrating the highest export growth rate such as 30.7% between 2008 and 2013 for Asia and Oceania.

However, growth is impeded by protectionism and trade barriers

Emerging markets have been increasing the use of trade barriers to defend themselves against free trade, particularly through the economic downturn.

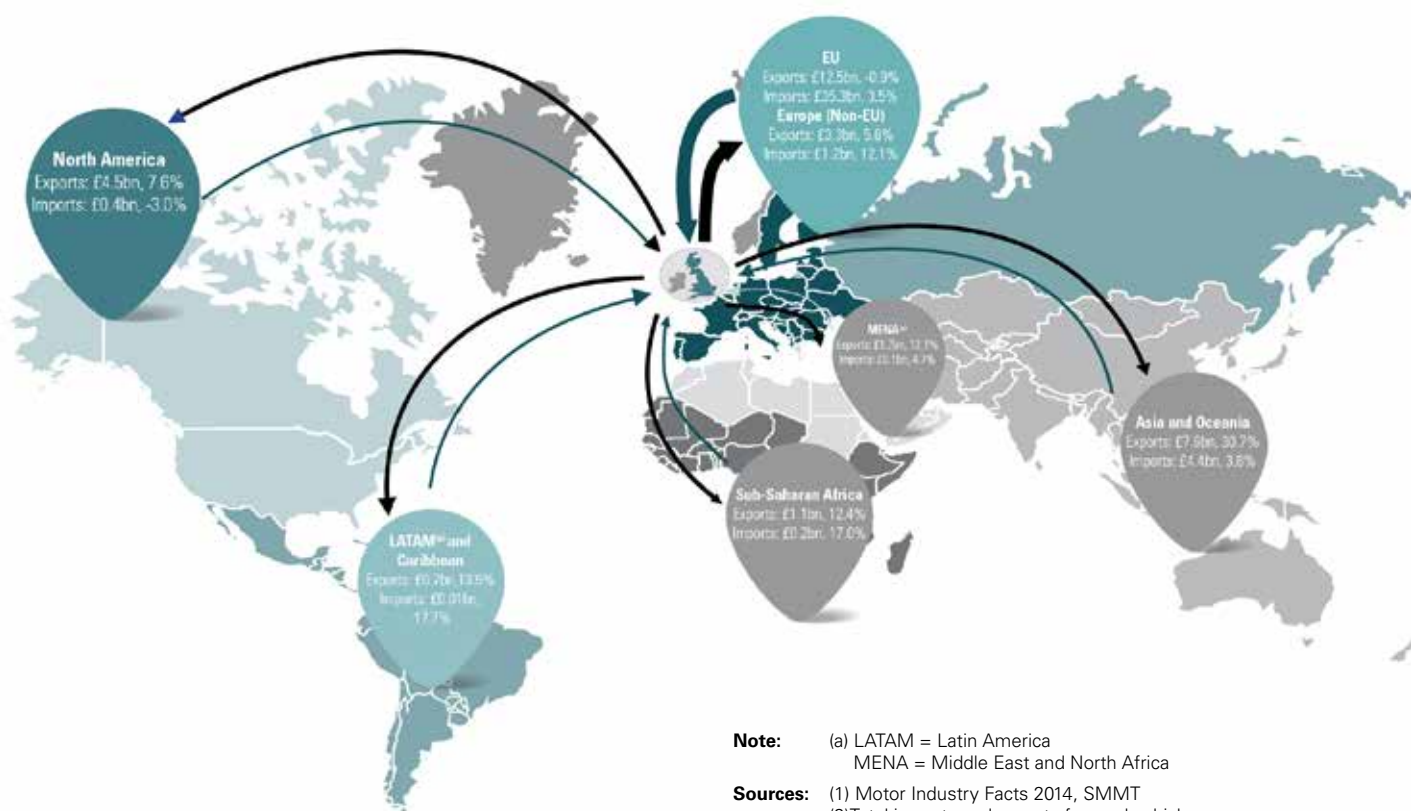
In June 2013, the ACEA, the European Automotive Manufacturers Association, highlighted 154 new tariffs and restrictive measures that had been introduced over the previous 12 months.

China is an important growth market for UK built premium and luxury cars. However, growth is hindered by trade and tariff barriers. For instance, the Range Rover Evoque currently attracts a 25% import tariff, 17% sales tax and 9% consumption tax in China.

Brazil also increased its import tariff across a range of imported goods in October 2012 including vehicles. It has targeted the car industry through the Inovar-Auto programme, which incentivises OEMs to establish local manufacturing plants through reduced import tariffs.

Today, the UK seeks to reduce these trade barriers through the collective bargaining position of the EU.

Figure 5. Growth of automotive related trade flows between the UK and EU/RoW
2013 value in £ billion and 2008-2013 annual growth rate⁽²⁾



The EU acts on behalf of its member states to negotiate Free Trade Agreements (FTA) on a global basis, leveraging the economic strength of the European trading bloc

Thirty free trade agreements have been successfully negotiated and concluded by the EU. There are advanced discussions with a series of other trading partners including large trading partners such as the US as well as key emerging markets such as Brazil and India.

India, for example, is a rapidly growing market for EU automotive exports. In value terms, automotive related exports have increased more than three-fold between 2003 and 2012 to €1.3 billion. This is still insignificant compared with India’s population of 1.2 billion, over two times the size of the EU, suggesting considerable further growth potential. Currently, imported cars into India can attract tariffs of over 100%.

However, trade negotiations are challenging and take several years to achieve a successful outcome

Over the next 15 years, 90% of global consumer demand growth will be generated outside Europe. Reaching an agreement with these countries is essential to the growth of the EU.

If all current trade talks are agreed, it is estimated that this would add approximately €275 billion to the EU’s GDP⁽¹⁾.

Figure 6. Selected examples of ongoing EU trade negotiations⁽¹⁾

Country	Initial Frame work	Negotiations commenced	Trade relationship (Automotive related EU exports and imports in 2012)	Status
USA	2012	2013	Exports: €33.1bn Imports: €7.1bn	4 th round TTIP discussions March 2014
China	Ongoing High Level Economic and Trade Dialogue (HED)		Exports: €27.4bn Imports: €2.4bn	16 th summit held November 2013
Russia	1997	1999	Exports: €17.5bn Imports: €0.1bn	No direct discussions since 2010
Japan	2011	2013	Exports: €7.6bn Imports: €9.7bn	4 th round discussions January 2014
Brazil Mercosur	1995	2000	Exports: €3.5bn Imports: €0.3bn	10 th negotiating round in March 2014
India	2006	2007	Exports: €1.3bn Imports: €1.6bn	Latest EU-India summit held in 2012

Figure 7. Overview of Free Trade Agreements with the EU⁽²⁾



“Being part of a large single EU market puts the UK in a far stronger position, with regard to ensuring free and fair trade with the rest of the world.”

Jaguar Land Rover⁽³⁾

Sources: (1) European Commission, ec.europa.eu
(2) Confederation of British Industry (CBI)
(3) KPMG interview programme

Benefits of collective bargaining power

Case study

Transatlantic Trade and Investment Partnership ("TTIP")

Background

- The EU and the US account for 32% of global automotive production and 35% of global sales. The EU-US auto-related trade currently is equivalent to 10% of total trade between the regions. Therefore reaching a trade agreement is important to the automotive industry and the wider EU⁽¹⁾.
- The TTIP is a trade negotiation focused on reducing or eliminating both tariff and non-tariff barriers to trade between the two economic blocs.
- A dialogue was initiated in 2012 and formal negotiations began in July 2013 with the TTIP presenting the opportunity to reinforce the world's biggest trade relationship. The US market represents approximately 9% of UK vehicle exports, compared to 19% across the EU as a whole⁽²⁾.
- In addition to the removal of import tariffs (currently 2.5% on cars imported into US from EU and 10% on cars imported from US into EU), one of the biggest benefits from TTIP is expected to be around mutual recognition and greater regulatory convergence across technical standards and approvals procedures.
- This is expected to improve efficiencies and have significant time and cost benefits. According to the Centre for Economic Policy Research, transatlantic auto regulatory divergences are equivalent to a tariff of 26%⁽³⁾.

"Non-tariff barriers such as different regulations and standards add over 20% to the cost of trading between the EU and US. A successful TTIP would significantly reduce this."

Executive Director, Government Affairs Ford⁽⁶⁾

How does Europe benefit?

- The Centre for Economic Policy Research in March 2013 estimated that the TTIP will benefit the EU to €119 billion per annum⁽⁴⁾.
- In June 2013, ACEA stated that the elimination of the tariffs and one quarter of non-tariff barriers would increase EU vehicle and parts exports to the US by 149% for the period 2017-2027⁽¹⁾.

What does it mean for the UK?

The UK maintains a strong lobbying position in Europe as the third largest country by population and second largest by GDP.

Long-term GDP per capita gains for the UK from TTIP are estimated at 9%⁽⁵⁾. From an automotive perspective, UK motor vehicle output could increase by up to 7% as a direct result of TTIP⁽³⁾.

Achieving mutual recognition of automotive standards is critical

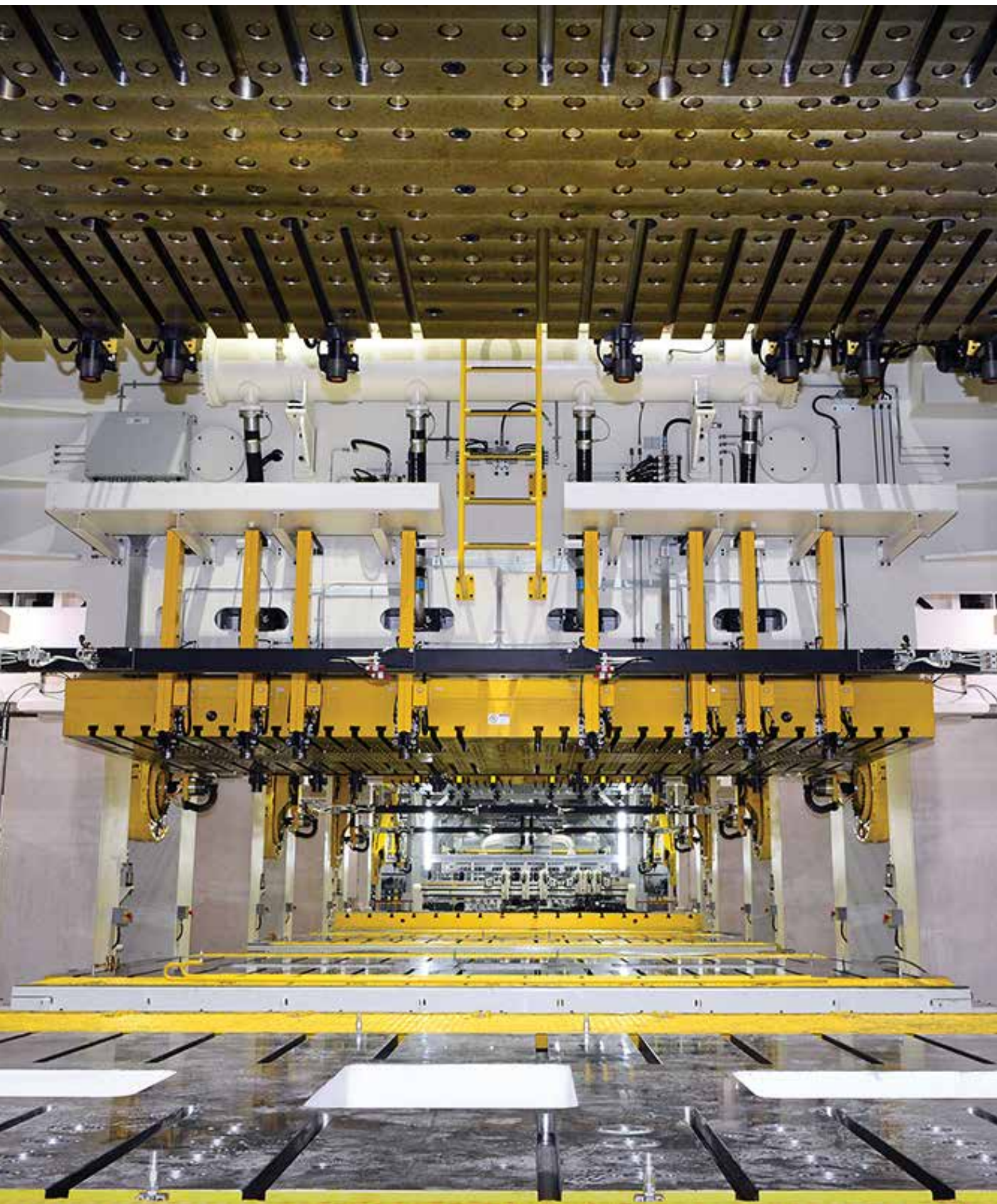
TTIP and the expected mutual recognition of standards will be an important step towards greater cooperation and convergence on standards between the two regions and globally. The EU will be central to such policy discussions and will be influential in setting global standards.

If the UK was not part of the EU then there would be the risk that the UK's relative negotiating power would be reduced as the UK's automotive market is much smaller than the US market. EU scale leverage is therefore beneficial to the UK automotive industry.

"Standardisation is good because it gives both people and business confidence."

Chief Executive, UK Tier 1 supplier⁽⁶⁾

Sources: (1) ACEA, www.acea.be/industry-topics/tag/category/usa
 (2) Eurostat
 (3) Centre for Economic Policy Research
 (4) EC: trade.ec.europa.eu
 (5) Global Economic Dynamics
 (6) KPMG interview programme



Importance of common EU regulation to the UK industry

Introduction

Common regulation and standards are important for manufacturers to compete across a single EU market

Harmonisation of regulations and standards at an EU level removes the complexity and cost to conform with varying national standards.

The EU will remain, the most important Single Market for vehicles manufactured in the UK for the foreseeable future, and the rules and regulations that apply to companies producing and selling in the EU have a substantial impact on the shape of the EU market.

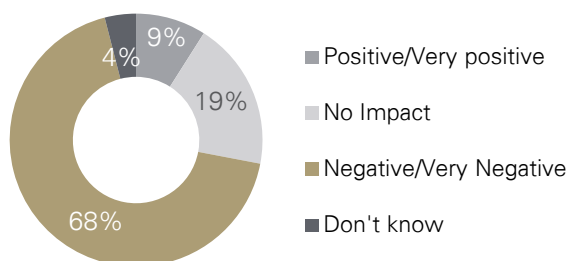
The UK, therefore, needs to have the ability to influence regulations such that they are appropriate for the structure of the UK industry

The CO₂ emissions regulation, REACH (the EU regulation concerning registration, evaluation, authorisation & restriction of chemicals) and the Electro-Magnetic Field directive are three examples where the UK has been able to influence the regulation to ensure that it is appropriate to the unique structure of the UK automotive industry. Other upcoming EU directives include:

- Implementation of CO₂ emissions regulations and other vehicle emissions standards;
- Noise reduction regulations for road vehicles;
- Enhanced road safety requirements for both the passenger and pedestrian; and
- New package for energy and climate 2030 and the Energy Efficiency Directive to reduce energy use by businesses.

SMMT 2014
Member
Survey

What would the impact be on ability to influence industry-wide standards and regulations if the UK left the EU?



Case study

New car CO₂ EU emissions regulations

The UK played a key role in shaping the EU CO₂ regulations to ensure it was appropriate for niche and small volume manufacturers, whilst still maintaining its environmental objectives.

European Union legislation adopted in 2009 set mandatory emission reduction targets for new cars sold in the EU. Under this regulation, the fleet average to be achieved by all new cars is 130 grams of CO₂ per kilometre (g/km) by 2015 and 95g/km by end of 2020.

Only the fleet average is regulated, subsequently manufacturers are still able to make vehicles with emissions above the limit provided these are balanced by vehicles below the limit. For manufacturers such as Aston Martin and Jaguar Land Rover, however, this would have been very challenging given their relative footprint in larger and higher performance cars.

Manufacturers that fail to comply with the regulation will be charged a heavy premium for each car registered, which is €5 for the first g/km of exceedance, €15 for the second g/km, €25 for the third g/km, and €95 for each subsequent g/km. From 2019, the cost will be €95 from the first gram of exceedance onwards per car sold.

The UK has played an instrumental role in achieving flexibility to the regulations to reflect the diversity of the European industry. Without this flexibility a number of UK niche and small volume manufacturers would have been competitively disadvantaged and would have faced substantial financial burdens.

The regulations now allow manufacturers which sell fewer than 10,000 cars per year in the EU (such as Aston Martin) to agree their own reduction target with the Commission.

Manufacturers selling between 10,000 and 300,000 cars per year in the EU (such as Jaguar Land Rover) can apply for a fixed target of a 25% reduction from their 2007 average emissions by 2015. This rises to a 45% reduction, from a 2007 base, in 2020.

It is worth noting that the 25% reduction is still greater than the 19% average overall market reduction to 130g/km in 2015, thereby supporting UK industry without compromising the environmental benefits of the legislation.

“If we do not participate, then the standards are all set in Europe...Europe has a voice on the global stage and it is incredibly important to be engaged in Europe and amplify what is important to the UK automotive sector.”

Chief Executive, GKN⁽¹⁾

Source: (1) KPMG interview programme

Influencing EU and global standards to benefit UK industry

Case study

Switzerland acceptance of Small Series Type Approval (EC SSTA)

The UK was able to influence the EU to ensure the Swiss authorities accepted EC SSTA vehicles without additional tests, ensuring extra costs were not placed on low volume manufacturers.

- The EC SSTA allows access to the EU marketplace for vehicles sold in small quantities (up to 1,000 EU registrations per annum) to meet different technical and administrative requirements and is particularly useful for low volume manufacturers such as Caterham, Morgan and Radical.
- Switzerland operates a mutual recognition system, designed to allow access to the market for EU type-approved vehicles. In 2012, the Swiss began to seek additional testing requirements for EC SSTA vehicles.
- The UK raised this with EU officials, who in turn negotiated with the Swiss authorities to accept, without any further paperwork, EC SSTA cars from 1 January 2013.

Case study

Electro-Magnetic Field Directive (EMF)

The UK has driven the process of creating awareness and achieving necessary temporary derogations that balance the policy's health and safety objectives with the cost of compliance for companies.

- The purpose of the directive is to minimise exposure to electromagnetic fields and in its original draft would have required the replacement of manual welding with automated processes.
- Manufacturers would have had to invest significant funds to automate processes to comply with the directive. This would have been particularly onerous for many small volume UK manufacturers, which pride themselves on their hand-built quality.
- For example, for one UK OEM the combined cost of compliance for their site and their suppliers would have been at least €90 million, with a potential loss of over 200 jobs, and would have taken at least 13 years to implement fully.
- The UK, through various bodies, has successfully lobbied and achieved derogations that allow flexibility in implementation, whilst minimising exposure resulting in a more workable directive.

Case study

Working Time Directive (WTD)

The UK negotiated a derogation in the application of this directive which has enabled flexibility and efficiency for manufacturers and employees.

- The Working Time Directive, 2003/88/EC limits the working hours to a maximum of 48 hours on average over 17 weeks for most workers. The UK was able to negotiate a derogation whereby workers can choose to work longer hours if they wish. The majority of Member States have now adopted laws that utilise the provisions of this derogation.
- The individual opt-out is under review and a number of business organisations claim its removal would have a significant and negative impact on the UK industry.
- The individual opt out is an integral part of the UK's flexible labour market. It enables manufacturers to respond quickly and efficiently to changes in demand and customer requirements. It also allows employees to choose to earn more by working longer hours.

The EU can be used as a platform to amplify issues that the UK considers to be important

Automotive product standards (e.g. in-car safety standards) vary globally with most large automotive manufacturing regions having their own standard setting bodies. For example US – National Highway Traffic Safety Administration (“NHTSA”), Japan – Japan Automotive Standards Organisation (“JASO”) and South Korea – Korea Motor Vehicle Safety Standards (“KMVSS”).

Through the United Nations Economic Commission for Europe (“UNECE”) and working with the World Forum for Harmonization of Vehicle Regulations (WP29), the EU plays a key role in

influencing global harmonisation and mutual recognition. The UNECE has approximately 60 contracting parties and the EU by virtue of having 28 votes effectively has a significant say on proposed changes and new standards.

EU standards are often adopted by other non-EU countries thus highlighting EU influence on a global level

China, which is the world's largest vehicle market, has adopted EU emission standards since 2000. The UK can play a key role in influencing regulations and standards to ensure issues important to the UK industry are adequately recognised at EU level and globally.

4 EU regulatory developments

Clear call for more reform

There is a clear call from UK automotive industry for simplification and reduction of the regulatory burden

There are issues highlighted by the industry around the complexity and volume of regulation and compliance requirements. The industry is also calling for EU regulations to be appropriate for business, with thorough assessments to take into account cumulative impact on cost, production timelines and reporting burdens.

SMMT members highlighted a range of areas as important for reform. The top four areas include better consistency in application of rules by all member states, followed by reform of EU Budget, financial reform for a stable Eurozone and then more efficient and cost-effective EU governance and institutions. This is highlighted in the chart below.

However, EU regulation does have a significant cost on business

The Department for Business, Innovation and Skills (BIS) estimates that the cost of EU regulation for UK business is £9.4 billion per annum⁽¹⁾. Specific estimates for automotive businesses are not available but given the scale of the sector (4% of GDP) it is likely to be in hundreds of millions of pounds.

Much of this cannot be avoided, for example for product-specific regulations (e.g. the proposed noise reduction regulations for road vehicles, which is estimated to cost the industry across the EU up to €6.0 billion over nine years⁽²⁾), UK-built cars sold in the EU would still need to comply with these regardless of UK's membership. For non-product specific regulations such as employment and health and safety regulations, it is likely that a large proportion of this cost would still remain in any replacement domestic regulation. For example, the Working Time Directive is estimated to cost UK businesses approximately £2.6 billion per annum⁽³⁾. The main cost drivers are paid rest breaks and holidays and it may be

that these elements would be retained in any domestic regulation that replaces the Working Time Directive.

The UK is not a lone voice in pushing for reforms and works with other EU member states to build consensus.

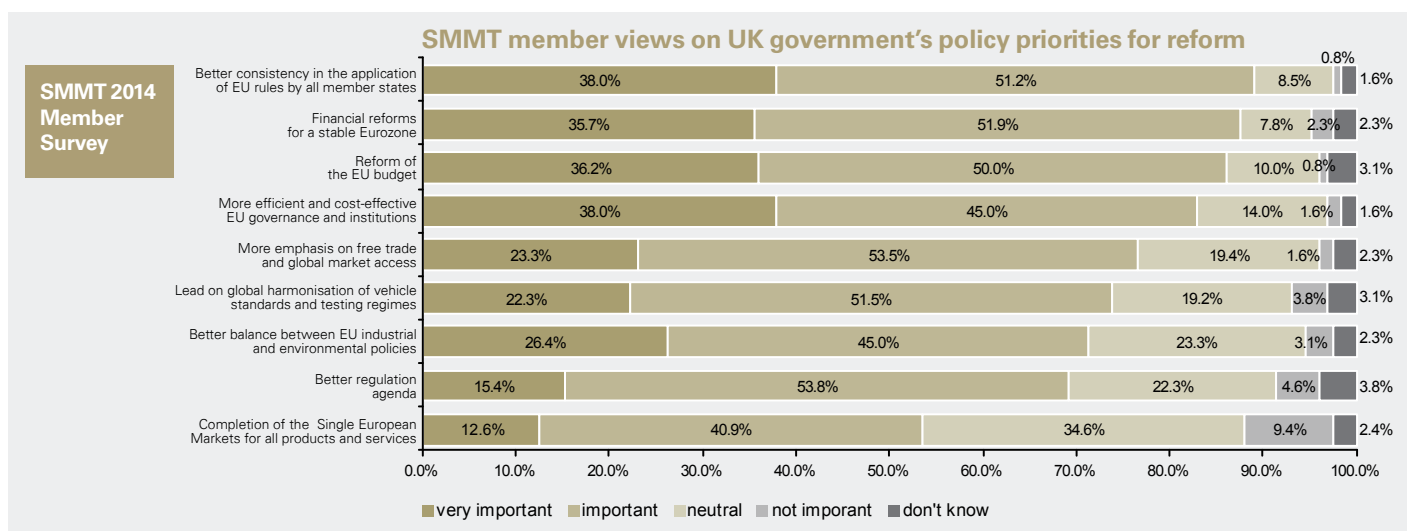
Smart regulation is a key deliverable of two successive EU initiatives – CARS 21 and CARS 2020. They are aimed at establishing a Competitive Automotive Regulatory System (CARS) and include key member states (including the UK, which is an active participant), EU institutions, automotive companies and stakeholders. The focus of the initiatives is on supporting and making recommendations on the competitiveness and sustainable growth of the automotive industry in the EU.

The group stressed the importance of:

- The current competitive pressure on costs, the cumulative effect of the legislation and impact on SMEs;
- Comprehensive and consistent application of principles of smart regulation; and
- In-depth assessment of the impact on industry, society and other stakeholders, notably the associated costs and benefits, considering also that the affordability of buying and owning a car is a pre-requisite to a strong market.

Some of the regulatory burden and cost is self-imposed by UK-only policies which are additional to EU directive requirements

Industry members highlighted energy costs as an example. In addition to EU requirements (under EU Emissions Trading System), UK also applies further energy efficiency regimes such as Carbon Floor Price, Climate Change Agreements and Climate Change Levy, Carbon Reduction Commitment and mandatory Greenhouse Gas reporting.





“The EU does need to become more business focussed in how it regulates. However, it is far better for the UK to be involved and influencing the conditions for the world’s largest free trade zone than not at all.”

Jaguar Land Rover⁽⁴⁾

“It’s not the EU that causes the issue. It’s our application of the rules. Often the regulators are seeking purity rather than pragmatism.”

Chief Executive, UKTier 1 Supplier⁽⁴⁾

Sources: (1) 2010 estimate, as quoted in www.gov.uk, Literature review – economic costs and benefits of EU membership
(2) EU Impact Assessment on proposed regulation on sound level of motor vehicles, 2011
(3) CBI, Our Global Future, 2013
(4) KPMG interview programme

EU regulation sustains innovation

Introduction

An important benefit of common EU regulation is that this creates a sufficiently large market that can sustain innovation

The automotive industry is critical to Europe, employing over 12 million people and a net exporter to the rest of the world. This importance is further reinforced by Europe's global dominance of premium, luxury and sports car manufacturing, which is at the cutting edge of product development and innovation.

A key example is the impact of EU emission standards and the resulting acceleration in innovation and development of new powertrain and fuel efficiency technologies in UK. See figure 8 below.

The UK's leading capability and specialism in this space has in turn driven investment with several OEMs already building or having plans to build hybrid and ultra low emission vehicle (ULEV) cars.

This is best demonstrated by Nissan's decision in 2010 to site the European production of its LEAF electric car in the UK. This was accompanied by a brand new battery plant built next to the car assembly plant in Sunderland. As at January 2014, 100,000 Nissan LEAFs had been sold worldwide, making it the best selling electric car globally⁽¹⁾.

Toyota has also sited the production of its Auris Hybrid, the first full mass-produced hybrid in EU, in the UK.

Collaboration with EU counterparts and access to EU funding will be key enablers in technology leadership and creating a competitive supply chain for the UK's ULEV industry

As discussed in chapter two, the automotive value chain is integrated across the EU and collaboration is important to leverage centres of excellence that exist across the EU.

In addition to R&D, a key factor in the UK establishing its position as a leader in the ULEV space will be developing a robust supply chain.

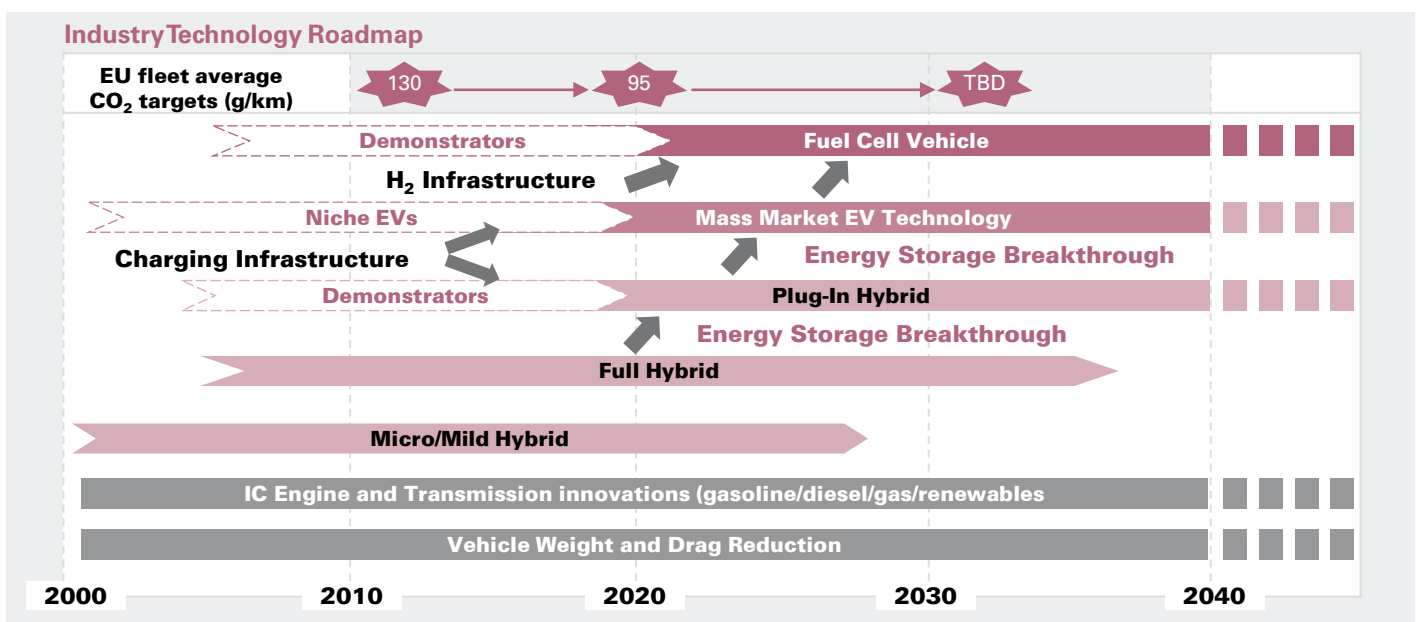
The UK Government, through organisations such as the Office for Low Emission Vehicles and the Automotive Council, set out £0.5 billion of funding in 2012, which will be matched by the industry, to support development of new supply chains for low carbon vehicles and other automotive technologies over the next 10 years.

In addition to this, UK businesses and institutions can access much larger EU funding programmes such as Horizon 2020 (discussed on the next page) through collaborative R&D.

Many UK academic institutions and businesses are already benefiting from EU funding. Across all sectors, UK businesses and universities, have received approximately £3.5 billion in FP7 funding (predecessor to Horizon 2020). The UK was the second largest recipient of funding after Germany.

Despite this success, UK automotive companies lag behind UK universities and companies in other sectors, such as aerospace, in engaging with EU funding. Improving the level of engagement has been identified as a key strategic initiative by the Automotive Council and must be improved if the UK automotive sector is to remain globally competitive.

Figure 8. Adoption of new powertrain technologies⁽²⁾



Sources: (1) Nissan: Helping To Drive The UK Economy, KPMG interview with Nissan
(2) Automotive Council

Access to EU funding is benefiting UK businesses

The Seventh Framework Programme and its successor, Horizon 2020, have significant funds earmarked for automotive related innovation

The EU's main instrument for funding research in Europe until 2013 was the Seventh Framework Programme for Research and Technological Development (FP7) which had a total budget of €50.5 billion. The UK ranked second after Germany, in terms of funds received, and contributions from the FP7.

Its successor is Horizon 2020, the biggest EU research and innovation programme so far with nearly €80 billion of funding available in the period from 2014 to 2020⁽¹⁾.

A particularly relevant area for the UK is the new European Green Vehicles Initiative, launched in March 2013. There is a European Commission budget of €1.5 billion allocated for "Energy Efficiency of Vehicles and Alternative Powertrains"⁽²⁾.

There is considerable focus on lower emission vehicles globally and demand for such vehicles is increasing

Many countries have proposed or enacted targets for lower emissions. China, for example, has enacted a target of 160 g/km by 2015 and a proposed target of 117 g/km (for gasoline vehicles) by 2020. Similarly, India, has a target of 113 g/km by 2021⁽³⁾.

The UK is a significant player in powertrain systems and has an opportunity to increase its global share if existing strengths are capitalised.

On this topic, there is a clear alignment between the UK government and EU agenda.

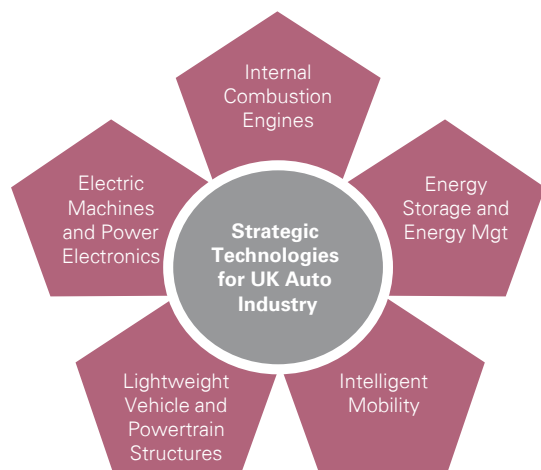
Through the UK Automotive Council, the UK Government, in partnership with the industry, has identified five technologies as strategically important and where the UK has capability and specialisation to lead. This is illustrated in figure 9 below.

To secure funding, companies and institutions need to create a consortium with at least three member states represented. This opens up networks and relationships with new partners and supply chains, which adds value for businesses above and beyond the R&D value.

Three recent examples where businesses and academic institutions have benefited from EU funding include:

- The University of Warwick is part of a consortium that has received funding (€10 million) from the EU FP7 for research into lightweight technology. This is for application in structural vehicle parts of future mass produced electric vehicles⁽⁴⁾.
- Ricardo plc, a UK headquartered engineering consultancy, received funding during 2012/2013 as part of a EU wide consortium from the FP7 for SmartBatt. The EU has allocated €2.2 million to support an innovative, multifunctional, light and safe concept of an energy storage system which is integrated in the pure electric car's structure⁽⁴⁾.
- European Thermodynamics Limited, a UK based manufacturer of high performance thermal management products, received €2.3 million between 2012 and 2014 for a thermo-electric power generation system powered by exhaust waste thermal energy⁽⁴⁾.

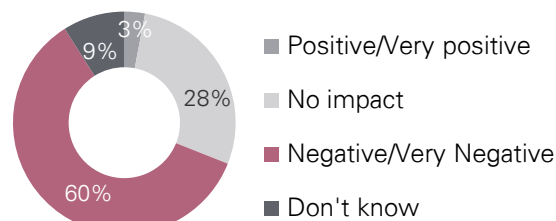
Figure 9. Automotive Council UK Strategic Technology Themes⁽²⁾



Sources: (1) EC website, ec.europa.eu/programmes/horizon2020
 (2) Driving Success: a strategy for growth and sustainability in the UK automotive sector, Automotive Council
 (3) The international council on clean transportation, www.theicct.org
 (4) EC CORDIS
 (5) KPMG interview programme

SMMT 2014 Member Survey

What would the impact be on the automotive sector's ability to access EU-wide private and public funding if the UK left the EU?



"EU funding allows us to increase our research capacity aligned to our corporate strategy and technology roadmaps as well as gain access to expertise from a range of disciplines and organisations."

Commercial Manager, MIRA⁽⁵⁾

Benefits of free movement of labour in the EU

Introduction

The UK automotive industry benefits from the skills and experience of both EU and global employees

The UK has a long history of benefiting from the skills transfer of overseas employees. In the 1980s, Japanese master engineers employed by Honda, Nissan and Toyota enabled the transfer of just-in-time and lean manufacturing techniques to the UK and a focus on eliminating waste, inconsistency and inflexibility in production systems.

More recently, German companies with UK plants have sought to re-emphasise training and apprenticeships, and as part of ongoing personal development, international experience and mobility of management is considered important.

Skills are a critical global competitiveness issue for UK automotive companies

Long-term prosperity requires a suitably skilled and experienced workforce. There is a shortage of qualified scientists, engineers and technologists (SET) in the UK.

The number of automotive manufacturing vacancies tripled between January 2013 and January 2014. According to employer skills survey 2013 data from UKCES, almost one in five of these are hard-to-fill vacancies. Thus having an EU-wide talent pool from which to select is important in filling these business-critical vacancies.

Access to a flexible and moveable workforce is key for current and future growth

As discussed in chapter two, the automotive industry is highly integrated across the EU and skilled engineers frequently move between plants or collaborate on research and development projects.

This is particularly the case when OEMs prepare for new vehicle production, where specialist teams are deployed to oversee production line reconfiguration and capital investment.

The process of employing or transferring non-EU nationals is complex and costly making intra-EU transfers considerably easier for businesses

The UK applies strict eligibility criteria for granting work visas to overseas, non-EU nationals. For example for Tier 2 (intra-company transfer) visas, UK businesses need to be licensed to sponsor applicants and prospective employees need to have worked for the company for at least one year, have at least £900 in savings and earn at least £40,600 per annum to qualify for transfers of more than 12 months⁽¹⁾.

Without access to EU talent, the ability of UK companies to compete would be more challenging.

“Our EU staff can travel at short notice if necessary. This is not possible for staff from non-EU countries such as India.”

Tier 1 supplier⁽²⁾

International experience has become a pre-requisite for individual career progression and in turn has benefited the wider UK industry through the development of employees

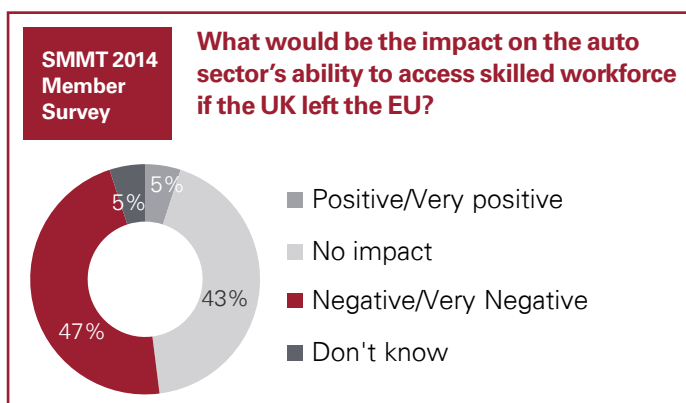
At leadership level in many OEMs and suppliers, there is a broad range of overseas experience, whilst a number of overseas businesses include UK nationals in senior positions.

For example, Ford's 14 member European Operating Committee comprises four American, four British, four German, one Dutch and one Indian nationals, reflecting the international nature of the company.

Below this level of senior management, many UK automotive businesses seek to blend a mixture of UK and international talent in a number of roles, and have developed graduate programmes that place great importance on international mobility for progression.

“Mobility of labour is important in providing opportunities for an exchange of ideas and also helping to mentor home-grown engineers.”

Bosch UK⁽²⁾



Sources: (1) <https://www.gov.uk/visas-immigration>. Accessed on 7 March 2014
(2) KPMG interview programme

Case study

BMW Group – Workforce mobility

The BMW Group has invested £1.76 billion in its BMW, MINI and Rolls-Royce manufacturing operations in the UK since 2000. The company is responsible for 11% of car production and 16% of engine production in the UK. It is the third-largest OEM in the UK and employs around 18,000 staff directly, including its dealer network, while supporting 46,000 UK jobs in total.

Mobility is critical to success

- BMW Group strategy is that production goes where the markets are largest and therefore requires many of its employees with key skills and experience to be geographically mobile.
- Flexibility and mobility are embedded in the culture of the company; they are the foundations on which BMW Group manages its international operations and key contributors to its success.
- At any one time, approximately 10% of the UK management population is on an international assignment, with up to 80% of the placements at BMW Group locations across Europe.
- Employee mobility is required for brief stints as well as for longer periods, at many levels of the organisation, for training in specialist skills and the sharing of best practice.
- To ensure the successful start of production of the new MINI in December 2013, over 140 staff from other parts of their company's network were seconded to MINI Plant Oxford and an equal number of UK employees worked temporarily in Germany during key phases of the launch process.

International leadership development

- All aspiring senior managers at BMW Group are expected to undertake international assignments to gain a thorough understanding of different business cultures and build strong professional networks.
- Participants in the BMW Group graduate development programme are expected to complete two international assignments, each lasting several months.

Decentralised HR strategy functions

- BMW Group has decentralised its strategic HR functions and located the organisational hubs responsible for defined international regions in four different global locations.
- The HR strategy function responsible for Europe, including Germany, is based in the UK (Bracknell).
- The international exchange of knowledge and experience is a key contributor to the successful achievement of the BMW Group's business objectives.

Case study

Vauxhall – Supporting new model rollout programmes

Vauxhall's Light Commercial Vehicle plant in Luton, has benefited from being able to backfill production line staff with EU counterparts on a short-term basis whilst staff undergo training programmes

- The introduction of new models into production often brings with it fundamental changes to production processes, techniques, equipment and skills requirement of the manufacturing workforce.
- This requires production line staff to go 'offline' to undergo training in advance of production of the new vehicles commencing.
- To avoid disrupting existing production whilst this happens, Vauxhall backfills the local manufacturing workforce with teams from other European plants.
- Currently, over 900 staff at Vauxhall's Luton plant are undergoing training for the next generation Vauxhall Vivaro model. Vauxhall has supplemented the local team with qualified staff from its factory in Poland to ensure that production of the existing model continues smoothly.
- This strategy relies on operatives being able to move freely and quickly across the EU to meet these short-term requirements, and allows new vehicle production to commence in as efficient a manner as possible.

Closing remarks

by John Leech

KPMG's study has established that the UK automotive industry regards continuing membership of the EU as central to its long-term success

The UK automotive industry has seen an unprecedented wave of investment by the likes of, BMW Group, Ford, Jaguar Land Rover, Nissan, Toyota and Vauxhall totalling well over £6 billion in the past three years. In addition to ease of doing business in the UK, a key contributing factor to attracting this investment is that the UK is an excellent location to make vehicles for the EU market. It has encouraged scores of smaller supply chain companies to make similar investments.

As such the UK automotive industry is expected to produce more cars and employ more people in each of the next five years. The industry will continue to be a leading example of the UK's rebalancing economy widely acknowledged to be a pre-requisite for sustainable long-term economic prosperity.

We have concluded that membership of the EU conveys substantial benefits to the UK's automotive industry. The main reasons for this are:

- The EU is the UK's largest trading partner by far. Half of UK vehicle exports are to EU consumers and over 40% of components purchased by UK vehicle manufacturers are from the EU. Continued unhindered access to this market is fundamental for most UK vehicle manufacturers.
- It is not just access to the EU market that is important, regulations define the shape of the EU market. Within the EU, the UK has influenced regulations like vehicle CO₂ emissions so that our industry is not disadvantaged, especially important for our smaller and luxury manufacturers like Aston Martin, Bentley, McLaren and Rolls-Royce.
- Some of the UK's vehicle manufacturers export worldwide, enjoying strong sales growth in China and other emerging markets. These manufacturers face high trade barriers, but the EU's bargaining power is a powerful force in trade negotiations.
- The automotive industry is highly globalised and UK vehicle manufacturers are highly dependent on their worldwide operations. Research and development requires special access to expertise so the free movement of engineers within the EU is an asset to the UK automotive industry.

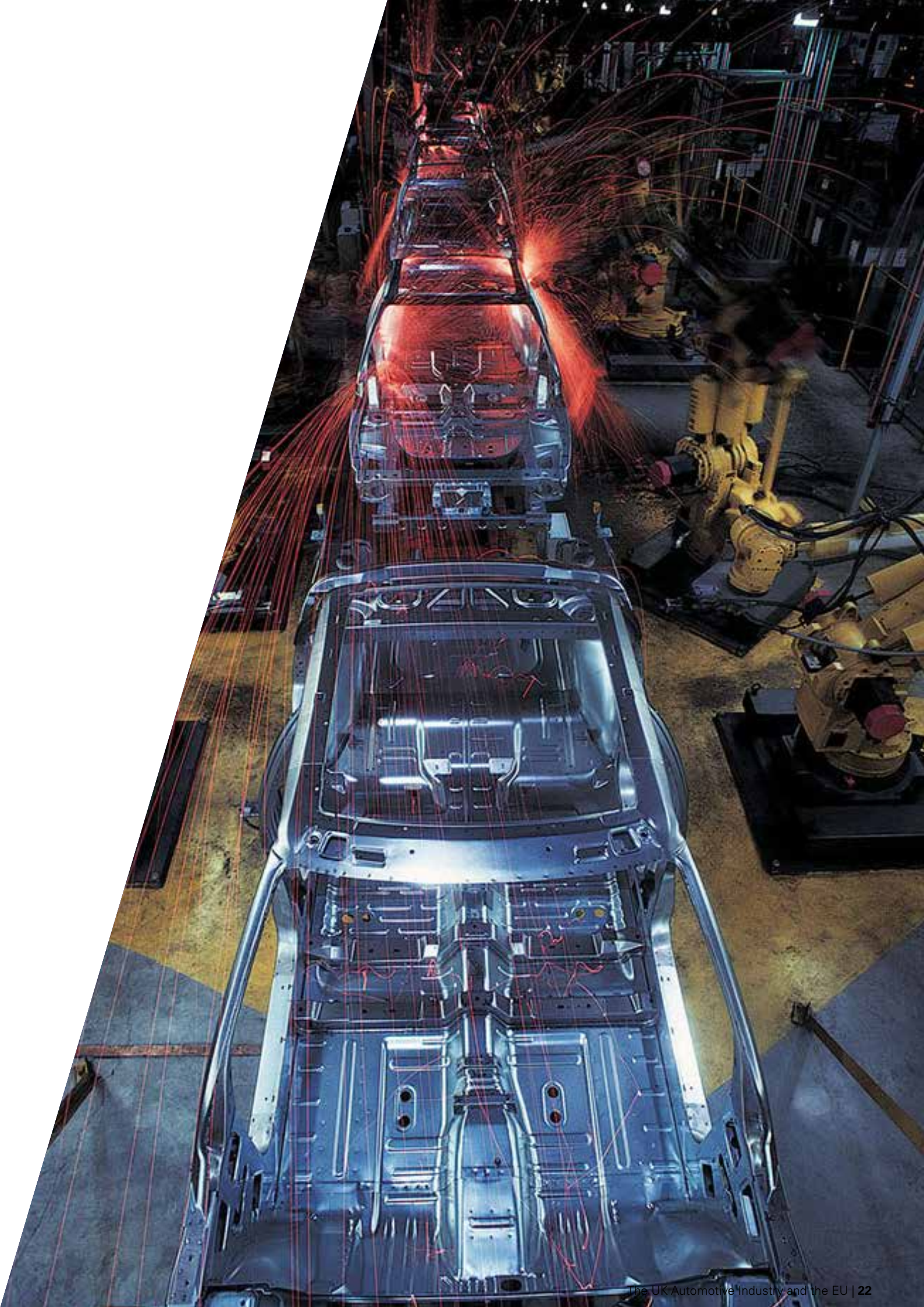
However, while our report shows the importance of EU membership to the UK automotive industry, it also shows that EU membership poses challenges. UK automotive companies feel that EU regulations need to be smarter and support the competitiveness of the industry. The complexity and volume of the regulatory burden on the industry is further amplified by additional UK regime layers such as the Climate Change Levy.

The costs of EU regulation to UK businesses is substantial – estimated at £9.4 billion per annum (across all sectors). If the UK were to exit the EU, it is likely that any replacement regulation would retain many of the same elements and therefore it may not be possible to avoid a large proportion of the associated costs.

On balance, the position of the UK automotive industry is clear – continued EU membership is vital to this £60 billion industry and its long-term prosperity.

John Leech

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