

Strengthening the Supply Chain

Improving the competitiveness of the
UK's Automotive Components sector



A report produced by SMMT's Automotive Components Section

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SMMT

The Society of Motor Manufacturers and Traders (SMMT) is at the heart of the automotive sector in Britain, encouraging and promoting the interests of the motor industry in the UK and abroad.

SMMT Industry Forum has created a number of programmes based around a common approach which enable a company in any part of the supply chain to make real measurable improvements in Quality, Cost and Delivery, while also improving partnership with its customers.

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Executive Summary

The UK is the base for a strong and diverse automotive industry. Its relatively low business costs make it one of the most attractive locations for investment within developed economies.

The automotive components sector is the source of some 190,000 jobs and has an annual turnover in excess of £15 billion. Companies in the sector are increasingly the source of the technological developments and innovations that are delivering environmental and safety improvements.

The automotive components sector is part of a global industry and is subject to intense competitive pressures. Those companies operating in the UK have been faced with particular difficulties and as a consequence there has been a reduction in the proportion of components sourced from the UK.

SMMT's Automotive Components Section has highlighted six areas where Government action could help reverse this trend. These would help to address growing concern within the sector that there will be further erosion of UK based supply industries.

1. Economy

The uncertainty surrounding the UK's entry into the single currency has increased the risks associated with investment in the UK. Companies have sought to cope with the relative strength of Sterling, but this has frequently been at the expense of new investment in capital equipment, training and research & development (R&D).

2. Skills and Training

The automotive sector is at the cutting edge of new technologies and component suppliers must be able to demonstrate their abilities to undertake R&D and new product development. The industry needs to attract more highly qualified staff and to improve the skills of those already working in it. To succeed it needs help from Government to make continuous learning and apprenticeship schemes more attractive.

3. Research and Development

The Government has introduced measures to encourage R&D expenditure in the UK. There is an existing base of high quality facilities and expertise, but without further action it will be difficult to reverse the drift of work away from the UK. The major R&D facilities for the global vehicle manufacturers and tier one suppliers are outside the UK and this makes it more difficult for UK based companies to compete.

4. Tax and Regulatory

The Government must ensure it assesses the impact of tax and regulatory changes on the international competitiveness of UK companies. Increases in these burdens have reduced some of the UK's traditional competitive advantages.

5. Investment in the UK

The automotive sector is highly competitive and there is increasing competition between locations for investment from the global players that dominate it. In this environment it is essential that the UK Government plays a more active role in promoting the UK to the global automotive industry.

6. Government Support Programmes

The Government provides a wide range of business support programmes. These are of particular benefit to small and medium sized companies, but too often these companies find that the schemes are difficult to access. A single entry point, where automotive companies could be advised on the schemes available to them from local, regional or national bodies would significantly improve the effectiveness of these programmes.

Introduction

The automotive sector is vital to the economic health of the UK. It is an extremely diverse sector encompassing the design, development and manufacture of vehicles and components, as well as their distribution, servicing and ultimate disposal. It has been traditional when discussing the sector to focus on the large multi-national vehicle manufacturers. This report, however, seeks to describe and highlight the issues and ambitions of those companies involved in the production and supply of automotive components.

Companies operating in this area are represented within SMMT by the Automotive Components Section. As a group they wish to build a greater public understanding of the importance of their contribution to the economy and to ensure that action taken by Government to support manufacturing recognises and addresses the challenges they face.

The Automotive Supply Chain

There are estimated to be 7000 manufacturing sites operating in the UK which supply to the automotive sector. Research by SMMT suggests that there are approximately 2000 companies where the majority of their business is in the automotive sector. It is estimated that these companies provide some 140,000 jobs and had a combined turnover of £12 billion in 2000. About fifty per cent of these companies fall into the Small and Medium-sized Enterprise (SME) category.

The Office of National Statistics (ONS) collects data on companies that manufacture parts and accessories for motor vehicles. This data indicates that there has been significant reduction in the number of enterprises operating in this market, but that employment has been stable between 1995 and 2000.

These official figures do not include all those that supply to the automotive industry, in particular those producing rubber, plastics and tyres, electronic and electrical components, as well as prefabricated metal products. These companies and products are an important part of the sector. SMMT estimates that in 2000 these companies had an automotive turnover of £3 billion and employed close to 50,000 people.

Products Supplied

The automotive supply chain stretches from the producers of raw materials through to the assembly of the most sophisticated electronic and computing technologies.

Many of these organisations are geographically in areas that have experienced a downturn in traditional manufacturing activity in recent years. These areas include the West Midlands conurbation, the North East cluster and some areas surrounding Swindon in the South West. The fortunes of the component sector are inevitably tied to those of the vehicle manufacturers. The impact of global over-capacity and the restructuring that has taken place in recent years has created uncertainty and difficult trading conditions for component suppliers.

The supply chain for a vehicle manufacturer is broadly split into three tiers.

- **Tier 1** These are companies that integrate whole systems for direct supply to a vehicle manufacturer. These include global operators that are increasingly providing a high level of R&D and product development as part of the integrated service they provide. At a local level they also supply value added sub-systems or assemblies.
- **Tier 2** These are companies that supply component parts or support services to the first tier suppliers for integration into the systems supplied to vehicle manufacturers. These can be nationally based suppliers or global operators.

Advantages of a UK location

■ **Tier 3** These companies are supplying raw materials for the supply chain or more generic engineering components and services. The raw material suppliers are frequently larger multi-national companies reflecting the world market for such materials. The more general engineering component requirements tend to be smaller and local operations that will be supplying their products for a variety of uses.

These broad definitions are a guide to the shape of the supply chain. The companies that operate within it are very diverse, frequently supplying to a number of sectors. There are strong links between these companies and the leading producers in the automotive, aerospace and telecommunications industries.

The automotive supply chain is important for the UK economy. The UK has enjoyed large scale investments by the major tier one firms. The UK has seventeen of the top twenty European supply companies. In addition more local SMEs, situated close to their customer base, create significant employment in the regional economies and make a significant contribution to their local communities.

The automotive sector is recognised for its development and use of technology and modern manufacturing processes. It also acts as a benchmark in terms of its management of environmental and social impacts.

The UK has a long automotive history. Vehicle and component manufacture have been a significant part of the UK economy since the early years of the 20th century. This heritage has created a strong skills base and expertise that continues to attract investment into the UK.

The automotive industry is global and no national economy can be protected from the changes and competition that this creates. In recent years the high profile decisions of vehicle manufacturers to rationalise their operations to tackle global over-capacity and reduce costs have impacted on the UK industry and created uncertainty. These should not distract attention from the key advantages that the UK retains as a base for the automotive industry.

Domestic Production

The UK provides the base for eight of the leading global car manufacturers, nine commercial vehicle production facilities, seventeen of the world's top tier one suppliers and around twenty of the leading independent automotive design engineering firms. This creates a strong pool of knowledge, expertise and domestic demand.

In the mid 1980s the UK was producing less than 1 million new cars. During the late 1980s and throughout the 1990s production increased, peaking at 1.8 million new cars. The impact of rationalisation and restructuring saw new car production fall to 1.5 million vehicles in 2001.

Output has been increasing throughout 2002 and the most recent forecasts suggest that production could reach 2 million units by 2005. Some 60 per cent of the vehicles produced in the UK are exported to European markets with products also destined for the USA and Japan. There are a wide range of cars made in the UK meeting demand in all segments of the marketplace. This breadth provides great opportunities for suppliers.

Stable Economy

The UK has maintained steady economic growth with comparatively low levels of inflation, interest rates and unemployment since the mid 1990s. The UK has enjoyed more than 10 years of sustained economic growth. The policies of successive administrations have been to maintain economic stability and this approach has enabled the UK economy to weather global economic disruption.

The economy grew by 2.1 per cent in 2001 and has continued to grow in 2002, albeit at rates lower than previously forecast. Strong domestic consumer demand, the UK's relatively smaller share in the declining technology sectors and flexible labour market have helped it outperform other European economies.

The comparatively strong performance of the UK economy and its relative stability provide an advantage for UK based operations and continue to offer an attractive proposition for potential inward investors.

Advantages of a UK location (continued)

Comparative Business Costs

A recent report by consultants KPMG has demonstrated that the UK remains an attractive location for international investment. The study 'Competitive Alternatives' compared business costs in North America, Europe and Japan. It found that the UK was ranked second lowest behind Canada after assessing cost components likely to vary by location.

Labour costs were identified as the most significant location sensitive cost, representing on average 59 per cent of location sensitive costs for manufacturing. The next most important cost related to corporate taxation, with transport, energy and land costs making up the other major elements of comparisons.

The report also looked specifically at the manufacture of automotive components. It found that the UK was the overall cost leader with particular advantages in the manufacture of metal and plastic components and electronic assembly operations. *See chart below.*

This very positive endorsement for the UK must be balanced by recognition that the overall differences in costs were relatively small and extremely sensitive to exchange rate changes. In addition the global nature of vehicle production means that competition for automotive business is increasingly from countries in Eastern Europe and developing economies in South America and Asia.

It is essential that Government carefully assesses the impact that extra taxation and new regulatory burden have on the UK's competitive advantage.

Developing Markets

The UK is a significant location for engine assembly in Western Europe. In volume terms car engine manufacture is the most important, with GM, Ford, Toyota, Honda, BMW, Nissan, MG Rover all having a significant presence in the market. However, there are also specialist companies like TVR, Cosworth and Lotus. Also there are

well-established manufacturers of engines for off-highway, non-automotive and heavy commercial vehicle applications like Cummins, Perkins, Lister-Petter and Alstom.

The continuity of assembly at these sites and planned major developments by Ford and BMW will continue to secure the UK's future as a major force in engine manufacture and development to 2005 and beyond. In 1995 it is estimated that the UK produced about 2.1 million car engines. Currently, that total could be in the region of 2.3 million and by 2005, if the business context remains favourable, that could rise to 3.5 million. The expansion envisaged by Ford at Dagenham is a key driver and could see it directly and indirectly responsible for well over half of this total potential for car engine assembly.

Research, Development and Technology

The UK is the base for a wide variety of technological expertise with leading design engineers supporting the development of products across the world. There are also world class testing and development facilities as well as the excellence in high performance engineering associated with the motor sport industry.

The UK has world class capabilities in key technologies including engine technology and components, diesel technology including fuel systems, braking systems and friction materials, sealing systems, bearings, CV joints and drive shafts, control software development, and advanced development techniques and test procedures across the whole spectrum of vehicle requirements.

These technological advantages are supported by a number of universities and further education facilities that provide specialised automotive industry courses, covering design, engineering, manufacturing, motor sport and marketing. **The components sector believes that this base of expertise could be developed further with support from Government.** This would be to the benefit of those already operating in the UK and an incentive to encourage others to undertake more R&D and product innovation here.

Automotive Components Industry – National Cost Comparisons

	Austria	France	Germany	Italy	Netherlands	UK	Canada	US	Japan
Composite of:	91.5 (5th)	91.7 (6th)	101.6 (8th)	87.8 (2nd)	89.4 (4th)	87.0 (1st)	89.0 (3rd)	100.0 (7th)	121.9 (9th)
Metal components (75%)	91.1	91.9	101.3	87.4	89.0	86.6	80.9	100.0	122.0
Plastic components (15%)	90.9	91.1	100.4	87.9	87.9	86.4	89.0	100.0	121.7
Electronic subassemblies (10%)	95.7	95.5	105.9	91.1	95.0	91.1	89.4	100.0	121.6

Source: Competitive Alternatives: A Guide to Cost Advantage. KPMG 2002. www.competitivealternatives.com

Challenges for the Supply Chain

Despite the significant volume of vehicles produced in the UK, many of the detailed purchasing and R&D decisions are not made here. The global vehicle and tier one manufacturers operate at a European level with decisions made centrally. To succeed, UK based suppliers must be able to compete on an international basis.

In recent years increased costs imposed by the Government in the form of the climate change levy and the recent increase in employers' National Insurance Contributions have caused a great deal of concern. Preliminary estimates suggest that the NICs increase will cost the automotive industry an extra £55 million. This increase, and that associated with the tax on the business use of energy, is eroding the cost advantages for UK companies and narrowing their relative advantage over those operating elsewhere in Europe.

Sterling/Euro Exchange Rate

In increasingly competitive global markets, currency fluctuations have a significant impact on the competitiveness of goods supplied from particular countries. Despite the industry's commitment to improved productivity an unfavourable exchange rate has impacted on the profitability of UK based operations.

Companies have had to cope with this competitive disadvantage. Vehicle manufacturers have been carefully reviewing all their costs and have sought to secure cost reductions from their suppliers and begun to source more components from outside the UK. To prevent the rapid erosion of the supplier base in the UK, companies have had to reduce their own costs. This has meant many have reduced investment in capital equipment, training and R&D.

In addition to the competitiveness issues raised by the unfavourable exchange rate, uncertainty about UK entry into the single currency also increases the risks associated with new investment. Those companies assessing the location for new facilities or additional capacity are faced with a greater degree of uncertainty on future costs in the UK than locations within the Euro Zone. In order to win any new investment, a UK based operation must demonstrate its ability to deliver very significant cost reductions to overcome any risk factors.

The Government must move speedily towards a decision on membership of the single currency, to end uncertainty and to move towards a more competitive Euro exchange rate.

Productivity and Competitiveness

The demand for increasingly competitive solutions from global vehicle manufacturers requires continuous improvement in the quality and scope of the services offered by the supply base. Keeping track of the demands and meeting the requirements is a high priority for the sector.

Process improvement and lean production is no longer just a shop floor quality issue. Finding new ways of improving productivity and competitiveness is a senior management task. Companies need the skills and techniques to manage product development and research programmes.

Quality standards and demonstrating compliance remain an important measure for vehicle manufacturers. The scope of the areas covered and the increasing focus on environmental and social performance require changes from suppliers. The costs of these activities for smaller companies can be prohibitive.

Relationships with Customers

The component supply industry has to cope with the changing demands of the global vehicle manufacturers. The excess capacity and fierce competition that prevails in the global automotive sector is forcing year-on-year reductions in the prices that suppliers are able to charge.

Component suppliers are also being asked to take on much more of the research and development work required to meet changing customer and regulatory demands. The vehicle manufacturer is increasingly relying on tier 1 suppliers to deliver whole system solutions. This reduces the number of suppliers with a direct relationship to the vehicle manufacturer and increases the product development, management and logistical support required from component suppliers.

Vehicle manufacturers are at the forefront of developments in e-business and online purchasing. While the Covisint venture has not expanded at the pace first predicted it is changing the way that component suppliers compete to win contracts. The concept of on-line bidding increases the risks for component suppliers and undermines the relationship between customer and supplier.

Automotive component suppliers must adapt to changes in the structure of the market, but they also want a more constructive dialogue with the vehicle manufacturers.

Challenges for the Supply Chain (continued)

Skills and Training

Finding and retaining skilled staff remains a high priority for the component supply sector. The increasing sophistication of the tasks that are undertaken requires high levels of skills at all educational levels.

The automotive sector finds it difficult to attract sufficient numbers of highly qualified people into the industry. There is concern that many young graduates have a negative perception of the sector.

The increasing sophistication of products, the demand for innovation and a greater role in product development are increasing the need to improve the skills and techniques available amongst the existing workforce. The Government's commitment to support the development of an Automotive Academy is welcome, but this must work with the components sector to ensure its needs are met.

The Government has made education a high priority and it has launched a range of initiatives to improve standards. **The components sector believes that more efforts are required to encourage companies to support the modern apprenticeships scheme and to provide additional incentives for companies that provide training opportunities for employees.**

Access to Support Programmes

The Government, Regional Development Agencies and European Union all offer a wide range of business support programmes and have commitments to support SMEs in particular. The experience of those in the automotive sector suggests that these can be difficult to access and information on the full scope of the services offered is difficult to find.

Companies have found that there are multiple qualification criteria, different access arrangements and a lack of easily available guidance. These present significant barriers to the take up of schemes and pose particular problems for SMEs. Experience in the sector suggests that many companies find it difficult to access this support and find that those responsible have little direct knowledge of the sector. **A single entry point that would provide expert advice and guidance for automotive companies would help to maximise the benefits of these schemes.**

SMMT member companies investing for the future

Mayflower Vehicle Systems

“At the completion of the various activities, typical improvements measured included a 58 per cent reduction in change-over time, 26 per cent in cycle time and 41 per cent improvement in schedule adherence. However, the most impressive result was a 100 per cent productivity improvement recorded by one supplier.”

Substantial cost and quality improvements were the rewards for Mayflower Vehicle System's drive for performance and sustainable improvements. Involving two groups of eight subcontractors, a steering committee was formed from the managing directors of the participant companies to review the progress of the activity.

Furthermore, during the two waves of activity over a 24 month period, 32 improvement change agents, 16 external, 16 internal, were trained in SMMT Industry Forum Common Approach Improvement Tools and Techniques.

The programme was operated by a 'training by doing' policy, with staff at Mayflower who had completed the training becoming the change agents and empowered to use the techniques learned to support process improvement projects aimed at maximum cost effectiveness.

A first tier supplier to the Ford Premier Automotive Group, MG Rover and Bentley Motor Cars, Mayflower Vehicle Systems offers engineering services from concept and feasibility through to prototype development and production supply.

Paul Copper, supplier quality assurance manager of Mayflower Vehicle Systems based at Coventry said 'The aim of the programme was to reduce in-process waste, thereby improving quality, delivery and cost, three of the main performance indicators.'

Shaping the Future

The Government recognises the importance of manufacturing and has recently published a Manufacturing Strategy that sets out the key factors guiding its approach. This has been supported by the report and recommendations of the Automotive Innovation and Growth Team (AIGT). High profile support for the sector has recently been expressed by the Prime Minister and the Secretary of State for Trade and Industry. This high profile will help to reinforce the Government's efforts to encourage automotive investment in the UK.

UK has already adopted the principles of sustainable development for a number of years and is committed to balance economic progress with environmental care and social responsibility and to report on its environmental, economic and social performance. Those companies in the supply chain that are unable to measure up to their customers' expectations will find it difficult to compete for future business.

Low Carbon Economy

The UK Government has indicated that climate change is one of the most serious threats facing the world's environment, economy and society. The UK has a legally binding target to reduce greenhouse gas emission by 12.5 per cent below 1990 levels by 2008-2012, under the Kyoto protocol. In addition it has a domestic commitment to reduce CO₂ emissions by 20 per cent by 2010.

The drive for low carbon transport will be increasingly important in shaping the demand throughout the supply chain. The ability to meet these new challenges with innovative new technologies or refinement of existing ones will be the source of future competitive advantage.

Road Safety

The motor industry is committed to continuing to create a safe environment for drivers, passengers and pedestrians. Automotive manufacturers and suppliers have been at the forefront of technological research and development to improve car safety engineering.

Next generation technologies are currently being tested. These include external airbags, softer bonnet and front-end materials, shatterproof windscreens, standardisation of daytime running lights and intelligent road speed adaption systems. The ability to deliver these increasingly complex technological solutions will be a key element in determining future competitive advantage.

Sustainability and Corporate Social Responsibility

Companies are operating in a complex environment where corporate behaviour and the impact of products and processes on the environment and local communities are important. Global companies must ensure that they address the social, environmental and economic concerns of their customers, employees and shareholders.

Corporate Social Responsibility is already seen by the industry as a fundamental element in strategic decision-making processes. Indeed, the automotive industry in the

Industry Vision

As part of its contribution to the future of the UK automotive sector, members of SMMT's Automotive Components Section have identified their own vision for the future of the industry in the UK. This seeks to define the key elements that will be required to support the sector's success into the future. The UK automotive supply industry must be seen as:

- A centre of excellence for the development of new technologies and innovative applications of contemporary technologies
- A globally renowned source of the best R&D, Design, Development and New Product Introduction
- Providing high levels of added value through its engineering and technology capabilities
- A vital ingredient in the plans of all vehicle manufacturers, due to its engineering and technology capabilities
- A major producer of components and assemblies for all types of vehicles, with particular strengths in providing ultra-high quality or technology related components, as well as those that benefit from timely production in close geographic proximity to vehicle manufacturers
- A world leader in the successful application of modern manufacturing techniques
- Achieving a high level of exports, both of technology and manufactured goods, whilst importing appropriate goods and services to ensure overall competitiveness
- Providing outstanding levels of customer service and responsiveness
- Regarded highly by the public and seen as an attractive place for young people to pursue their careers.

SMMT member companies investing for the future

Tolwood Limited

"The benefits achieved not only helped Tolwood to achieve customer expectations on quality and cost, but also allowed further investment and increases in capacity and growth in customer accounts."

A management buy-out in 1999 provided the catalyst for change at Tolwood - which supplies components and fasteners to clients including Ford, Nissan, GKN, KSR and NSK.

The Accelerate* programme helped the company to focus on the future and drive forward a culture of continuous improvement that would secure its position in the marketplace and enable the business to realise its potential. A formal process of identifying, quantifying and implementing the necessary improvements was instigated by PDS Consultancy Services and the main focus was on Tolwood's high added-value products; press, weld and paint.

New welding robots were purchased, which operate on a double day shift to produce higher value-added products. Potential automotive customers were targeted and improvements made to the internal productivity of the organisation.

As a direct result, Tolwood went on to secure almost £2 million of additional work and has expanded its customer base. The purchase of a paint-plant - at a cost of almost £1 million - has enabled the business to become self-sufficient.

Now the company is looking forwards to a bright future. Employment figures are set to rise from 105 to 160 by 2005 and a new factory in the Midlands, at Aldridge, opened in the Autumn 2002, to support Tolwood's 'Just In Time' delivery and reduce response time for customers based in the region.

*Accelerate. An integrated action programme aimed at improving the competitiveness of the automotive component supply industry in the West Midlands.

Recommendations

The automotive components supply sector remains a significant part of the UK economy. It currently faces a range of pressures that create a very difficult operating environment. The companies that make up the sector recognise that there are no quick fixes, but are looking to Government to help foster the conditions that will assist them in improving their competitiveness. To achieve this, there are a number of areas that companies believe need to be addressed. These include:

Economy: The UK economy has performed comparatively well, but domestic consumer demand has masked the difficulties faced within manufacturing. The Euro/Sterling exchange rate remains a major concern and component manufacturers recommend early action to determine the future participation of the UK in the single currency.

Skills and Training: Meeting the future needs of their customers will require component manufacturers to recruit and train increasing numbers of skilled staff. The automotive components sector will need to attract more qualified engineers into the industry and to raise the skills levels of those already employed. The Government should seek to develop further incentives for companies and individuals to commit to continuous learning and to stimulate further interest in supporting apprenticeship schemes.

Research & Development: Automotive components can be supplied from many parts of the world, many with much lower labour and social costs than those that prevail within the European Union. Increasingly, product development and innovation are the factors that help companies to secure competitive advantage. Encouraging greater expenditure on R&D is important in building this capability in the UK. Industry has supported the measures Government has taken so far, but it needs to pursue further measures.

Tax and Regulatory: There is concern that increases in taxation and the burden of regulation are reducing the UK's traditional advantages and undermining the competitiveness of UK based companies. The climate change levy and the planned increases in employers' NICs are examples of measures that disadvantage UK based plants in competition with those in other parts of the EU. The UK Government must ensure that it maintains a tax and regulatory regime that does not disadvantage UK manufacturing.

Investment in the UK: There is increasing competition between locations for new automotive investment. The impact of capacity reductions by the major vehicle manufacturers makes it essential that all efforts are made to secure existing facilities and to encourage the development of new ones. To retain and improve its competitive position the sector needs to increase investment in capital equipment; human capital and R&D. Ministers need to be more actively involved in persuading companies to invest and in promoting the benefits of the UK as a base for automotive manufacturing.

Government Support Programmes: The UK Government provides a wide range of business support programmes. It is recognised that these can be difficult to access, particularly for small and medium sized companies, and there is concern that resources are not sufficiently focused to deliver significant improvements. The automotive components industry recommends that Government creates a single entry point where automotive companies can receive information and advice on the business support that is available from local, regional and national bodies.



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