



Northwest Automotive Cluster Development Strategy

2009 to 2019

January 2009

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Executive Summary

The overall vision for the cluster is to have:

A globally competitive cluster with world class standards of excellence in Manufacturing, Engineering, Supply Chain Management, Innovation and Workforce Skills

Based on the evidence gathered four strategic themes have emerged:

- | | |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ST1 | Support the regional sector through the current economic situation by,
1.1 understanding the impact it is having and provide support where possible
1.2 preparing the sector for a future upturn
1.3 ensuring all public sector support is co-ordinated and customer focused |
| ST2 | Enhance current supply chains by,
2.1 enhancing the logistics capability of the vehicle manufacturers
2.2 providing the right infrastructure and facilities
2.3 developing people with the right skills
2.4 supporting continued investment in the regional based companies |
| ST3 | Develop future value chains by,
3.1 exploiting new/emerging technologies
3.2 building on and exploiting regional competencies
3.3 facilitating collaborative networks
3.3 supporting inward investment |
| ST4 | Respond to the environmental agenda by supporting companies to,
4.1 use resources efficiently
4.2 minimise waste
4.3 respond to climate change |

The primary context for this strategy is the Northwest Regional Economic Strategy and the Northwest Manufacturing Strategy. The findings from a mapping study undertaken in 2007 (5) and the additional work undertaken by the Institute for Manufacturing at Cambridge University (6) together with intelligence gathered regionally, nationally and globally regarding the issues, drivers and future trends in the sector have all informed the strategy.

The evidence gathered examined the context as well as the structure and configuration and capabilities and competencies of the cluster. The findings are summarised below:

Strategic Context:

- The current downturn in the economy is having a major impact in the sector and is affecting the whole of the supply chain.
- The vehicle manufacturers and their related support companies are the prime sectors for employment and economic activity. They are also under significant threat and need to maintain their competitive position within their parent company group.
- To maintain employment levels it will be necessary to attract new business into the region.
- Multi-nationally owned Tier 1 suppliers are under threat regarding future investments since the majority of them supply out of the region and in some cases outside of the UK.
- The current exchange rates are making UK based suppliers more competitive in terms of cost than their European counterparts.
- The smaller companies (tier 2 and 3 suppliers) are in the main locally owned, responsible for their own value chain and can determine their own strategy.
- Public sector initiatives are fragmented, reactive and confusing, with awareness limited to vehicle manufacturers.

Cluster Configuration/Structure:

- The traditional industry classification for the Northwest automotive cluster would benefit from alternative perspectives based on their value chain footprint and supply network configuration.
- The majority of the automotive companies in the Northwest work independently of each other.
- There is significant variation in the material and financial flows in and out of the region's vehicle manufacturers and consequently their contribution to regional/national value-add.
- Tier 2 companies are increasingly located outside the region.
- The value-chain of smaller firms is within the region, but amongst the larger vehicle manufacturers it varies considerably with some having either a European or global footprint.
- Logistics and infrastructure is of particular interest to vehicle manufacturers but not particularly at Tier 1 and below.

Cluster Capabilities and Competencies:

- Innovation is seen as well managed at company level, but regional innovation capability is seen as a weakness, with no regional strategy.
- There is potential to use current regional competencies in just in sequence (JIS) capability to promote more local outsourcing,
- There is a skills deficit at graduate engineer and technician level, although numbers suggest a 'cohort' scale approach is required to develop a highly skilled group to support the regional needs.
- There is a need to upgrade the business processes of Tier 1's (and Tier's 2/3s); this is recognised by both the vehicle manufacturers and the Tier 1's themselves.
- There is a lack of knowledge on the capability of the Northwest automotive sector.
- There are exemplar supply chain competencies within the Northwest which should be shared with non-competing partners.

Appendix 1 provides a summary of the sector analysis gathered from the recent mapping study (5) and the work undertaken by the Institute for Manufacturing at the University of Cambridge (6). The implementation of the strategy is through the delivery of an industry led rolling 3 year action plan. A high level 10 year Activity Plan is presented in Appendix 2. Appendix 3 provides a 1 page summary of the strategy, evidence base and activities to deliver the strategy.

1. Purpose of the Strategy

This document sets out a ten year strategy for the Northwest Automotive Cluster and identifies a series of key activities to deliver that strategy. In developing the strategy consideration has been given to the global issues, trends and drivers in the industry. Extensive consultation has taken place with key stakeholders including automotive companies within the regional cluster. Consideration has also been given to the Northwest Manufacturing Strategy, the Regional Economic Strategy and the initial findings from the New Automotive Innovation and Growth Team initiative.

The automotive sector in the Northwest has been identified as a key internationally competitive sector for the region. In order to sustain and grow the sector it is important therefore that the stakeholders have an informed and industry led strategy.

1.1 Key Objectives

The key objectives of the strategy are to:

- Support the cluster through the current economic situation.
- Ensure the continued presence of and future investment in the regions' automotive manufacturing community.
- Be recognised nationally and internationally as a premier location for automotive manufacture.
- Develop a world-class automotive supply base that can compete in the global market.
- Exploit expertise which is relevant to the present and future manufacture of vehicles and automotive components in the region.
- Ensure that the companies within the cluster respond effectively to the global environmental agenda.

1.2 Links to Regional Manufacturing and Economic Strategies

The strategy for the automotive sector is aligned with the regional manufacturing strategy and regional economic strategy. More specifically the strategy seeks to,

- Support businesses to develop productivity, enterprise and skill levels
- Help businesses to work smarter and increase their capacity and capability to innovate
- Improve the interaction between businesses and the science/HEI base
- Help companies respond to global opportunities and risks
- Support companies to use resources efficiently and respond to climate change
- Develop a highly skilled workforce at all levels
- Improve the image of manufacturing
- Ensure that places, spaces and infrastructure are fit for the purpose of manufacturing.

1.3 Measures of Success

The key measures of success of the strategy are:

- Continuing presence of a significant automotive cluster in the region which is bigger, better and stronger.
- Continued investment into the regionally based global automotive companies by their parent companies.
- The presence of a common sequencing/logistics park for the sub assembly and sequencing of components into the region's vehicle manufacturers.
- Increase in GVA of the cluster.
- Increased output from the vehicle and component manufacturers in the region.
- Increased levels of overseas export.
- Increased level of employee skills relevant to the current and future needs of the companies in the cluster.
- New inward investment into the region.
- Improved quality and delivery performance levels of component suppliers.
- Engagement of companies and universities with technology development initiatives relevant to the design, development and manufacture of future vehicles and the infrastructure required to support future vehicles.
- Improved use of resources and reduced levels of waste.

2. Policy Context

2.1 Background

The primary context for this strategy is the Northwest Regional Economic Strategy (3) and the Northwest Manufacturing Strategy (9) and the actions identified within these strategies. Other national, regional and sub regional strategies have been considered.

The national strategy for supporting the Automotive manufacturing industry in the UK over the last six years has been based on the recommendations from the Automotive Innovation and Growth Team Report (1). The future technologies which the industry has identified and which supports the research, design and development projects in the UK automotive industry is articulated in the Foresight Vehicle Technology Roadmap (2). In addition the strategy in the Northwest has been aligned with the RES 2006-2009 Transformational Actions (3). That strategy focused on a number of areas all aimed at improving the competitiveness of Northwest based automotive manufacturing companies through e.g. supply chain competitiveness, workforce development, innovation, inward investment and international trade.

A business plan (4) for the formation and development of the Northwest Automotive Alliance (NAA) was approved for funding support from the NWDA in 2003 covering the period 2003 to 2006. The business plan was based upon the needs of the sector as determined from the

Automotive Cluster Mapping Study (5) carried out in 2002 and the Automotive Innovation and Growth Team (AIGT) report also published in 2002. The cluster mapping study identified the structure of the cluster and the contribution made to the economy of the region whilst the AIGT report identified a national strategy to improve the competitiveness of the industry in the UK. A SWOT analysis was conducted as part of the mapping study and this together with the findings and recommendations of the AIGT report, led to the development of the NAA strategy and action plan, 2003 to 2006 (4). This was endorsed by the industry led NAA Board who have overseen the implementation of that strategy and action plan.

In 2007 a further mapping study of the Northwest automotive cluster was undertaken (6) the focus of which was to evaluate the evolution of the cluster over the last five years, identifying the key reasons for the successes and failures. As part of the study a view of the expected changes over the next five years was presented by identifying the key drivers, risks and opportunities. Further work on the issues and priorities in the Northwest has been undertaken by the Institute for Manufacturing (IfM) at Cambridge University during 2008 (7). Also in 2007 a parliamentary report into the success and failures of the UK car manufacturing industry was published (8). The findings from these reports and from focused events held with representatives of the cluster companies and key stakeholders, together with national and international intelligence on the global automotive industry, have helped in the formation of this strategy which aligns with the Northwest Manufacturing Strategy (9).

2.2 New Automotive Innovation and Growth Team (NAIGT)

The original Automotive Innovation and Growth Team review, conducted in 2002, gave rise to initiatives such as the National Supply Chain Groups Programme; the Low Carbon Vehicle Partnership; the Automotive Academy (now part of the National Skills Academy for Manufacturing); and two technology centres of excellence – Cenex for Low carbon and Fuel Cells Technologies and innovITS for Intelligent Transport Systems and Services. The previous AIGT has reached a natural shelf life with a number of the programmes and initiatives having been subsequently implemented, or reaching maturity

The Department for Business, Enterprise and Regulatory Reform (BERR) have commissioned a new AIGT which will develop an integrated strategic action plan capable of lasting 15 years with milestones aligned with other related policy initiatives that is supported by key stake-holders. Also an improved understanding of the policy levers available to government that can be deployed in support of the automotive sector.

The work of the NAIGT is being delivered through an industry-led Steering Group (chaired by Richard Parry- Jones CBE), which has overall ownership of the NAIGT. Expert sub-groups are addressing a series of linked issues in the areas of Supply Chain Development, Technology and Low Carbon Product Development, Technology and Low Carbon Infrastructure, Business Environment and Key Performance Indicators. The final report of the NAIGT is due around March/April 2009.

Early indications are that there is a need to

- retain both vehicle manufacture and maximise added value and future supply chain activity in the UK,
- increase supplier competencies particularly at tier 2 and 3 levels in the supply chain,
- strengthen the internationalisation of UK based suppliers
- have a better framework for industry-university collaboration
- review ways to exploit the strength of the UK niche vehicle sector

3. Market Analysis

3.1 Sector Definition and Size

In accordance with the original Northwest Automotive Cluster Mapping report (4) the definition of the automotive sector in the Northwest is:

“Everything upstream of vehicle making, extending as far as the point where it is meaningful to describe the activity as inside the automotive industry. It does not include anything downstream of vehicle making such as car retailing and after market supplies”.

This is the basis upon which most studies of the automotive sector in the UK have been conducted. The SIC code which best describes the sector is SIC 34 covering vehicles and engines, bodies, automotive components and automotive electrical components, although a significant number of companies who are in the automotive supply chain do not necessarily categorise themselves in terms of SIC 34.

The industry classifies itself in terms of sub sectors:

- Volume vehicle manufacturers (>100,000 units p.a.)
- Prestige cars
- Commercial vehicles
- Specialist and low volume vehicles
- Coach, trailer and body builders
- Body shell and trim
- Power unit and drive train
- Chassis equipment and systems
- Body equipment and systems

These sub-sectors are supported by related and supporting industries such as transport and logistics, sub-contract engineering services, general engineering, design and test.

Despite the current downturn in production due to the global economic situation, almost 70 million vehicles were produced worldwide in 2007 with almost 52 million of them passenger cars and nearly 18 million utility vehicles. The world growth in automobile output has continued for several years (+4.3% in 2006, +4.5% in 2007). More recently this growth has been driven by China, India, Korea and Japan. Likewise in Europe there has been a growth in output, with Russia's market increasing significantly, so much so that Europe and Asia advanced at an almost comparable rate in 2007. There has been a considerable downturn in output in North America with South America showing increased output.

In the UK output increased by 5.6% in 2007 to 1,750,255 units (compared with 1,656,961 in 2006). This is still short of the 1,856,126 units recorded in 2004 and even further from the 2,332,000 units posted in 1964. Japanese brands Nissan, Toyota and Honda now account for 60% of British output. Output in the UK is predicted to fall dramatically in 2009 and by as much as 50% in some areas, due to the downturn in the economy.

3.2 Global Issues, Trends and Drivers

3.2.1 Global competition

The globalisation of the automotive industry greatly accelerated during the last half of the 1990's due to the construction of important overseas facilities and establishment of mergers between giant multinational automakers. Increasing global trade has enabled the growth in world commercial distribution systems, which has also expanded global competition amongst the automobile manufacturers. Japanese automakers in particular, have instituted innovative

production methods by modifying the U.S. manufacturing model, as well as adapting and utilizing technology to enhance production and increase product competition.

The world's largest automobile manufacturers continue to invest in production facilities in emerging markets in order to reduce production costs. These emerging markets include Latin America, China, India, Malaysia and other markets in Southeast Asia.

3.2.2 Overcapacity

There is currently an estimated 30% overcapacity worldwide with a 20% overcapacity of vehicle production in Western Europe. Overall, there is a worldwide capacity glut of 22,000,000 units. Currently the industry has the potential to build more cars and trucks than there are people with the ability to buy them which will eventually lead to the closure of some manufacturing facilities across Europe.

Whilst the US has reduced its market share over the last 5 years the EU has marginally increased its market share. Leaner production methods have meant that more can be produced from the same facilities.

Industry overcapacity has cut profits, driven consolidation and increased the tension between automakers and suppliers. Increased flexibility, greater volumes for platforms and components will relieve some of the pressure, but not in the short term.

3.2.3 Consolidation

The automotive industry is undergoing major consolidation with mergers and acquisitions. The three US car makers (GM, Ford and Chrysler) have merged with, and in some cases established commercial strategic partnerships with European and Japanese automobile manufacturers. All three companies are currently experiencing severe financial problems with help being requested from the US government. Some mergers, such as the Chrysler Daimler-Benz merger, was initiated by the European automaker in a strategy to strengthen its position in the U.S. market. Overall, there has been a trend by the world automakers to expand in overseas markets.

Increasing global competition amongst the global manufacturers and positioning within foreign markets has divided the world's automakers into three tiers, the first tier being GM, Ford, Toyota, Honda and Volkswagen, and the two remaining tier manufacturers attempting to consolidate or merge with other lower tier automakers to compete with the first tier companies.

3.2.4 Outsourcing

As vehicle makers seek to cut costs they are outsourcing more to the supply chain which are increasingly moving to low cost manufacturing countries. With the current (2009) exchange rate of the pound compared with the euro and the dollar, the UK is becoming more competitive as a source of supply. Whether this continues is dependent upon future exchange rates and the growth of the economies in the so called "low cost countries."

The increased outsourcing has led to the growth of major global suppliers which in turn has led to a bigger squeeze on 2nd and 3rd tier suppliers who need to innovate and add value to their product, consolidate or co-operate to reduce fixed costs and achieve larger scale or diversify so as not to be totally dependent upon the automotive industry.

A key aspect of outsourcing is the development of enhanced capabilities by automotive suppliers. An obvious cost benefit is that supplier wage rates are often less than those at the vehicle makers. At the same time quality benefits are also expected together with increasingly sophisticated engineering and operational capabilities. This can be seen as a staged development but at each stage the vehicle manufacturer passes more risk to the supplier.

3.2.5 Environmental Legislation

In recent years the automotive industry has been affected by a wide range of environmental policy measures almost all of which have been developed at the EU level. Environmental policy has influenced product design, forced technological development and added costs. Concern about climate change is leading to particular attention being given to low carbon vehicles which has been highlighted in the Government's Powering Future Vehicles consultation document. Environmentalists have been sharply critical of what they see as special pleading by business. Industry, in turn, has argued that costs imposed by environmental regulations damage competitiveness.

More recently it has been argued that regulatory interventions can actually enhance competitiveness by stimulating innovative activity in companies and creating "first mover advantage". This has had a positive impact in encouraging industry and environmental groups to explore a common agenda.

It is clear from past experience that environmental policies and regulations do affect the competitiveness of both companies and countries. Unrealistic timetables for the implementation of new regulations or implementation in a way that imposes greater burdens here than in other countries can cause significant damage to competitiveness, sometimes with little in the way of compensating environmental benefits.

Emission standards are compulsory in all EU countries. Euro IV standard had to be reached by 2006 and vehicle manufacturers are currently working towards Euro V standard which will come into force in September 2009. Recycling and the end-of-life vehicle directive are having an impact. Currently approximately 25% of each end-of-life vehicle goes into landfills. The target is to reduce this to below 5% by 2015.

3.2.6 Consumer demand

There is a growing demand for more choice which is leading to volume car production moving more towards a "made to order" strategy with a multi option choice. The market for niche cars is growing. All of this has led to a variety of body shapes being produced on common platforms.

The rising costs of fuel and increased taxation is leading to more demand for fuel efficient/greener smaller cars. Every step toward greater fuel efficiency, reduced emissions and auto/fuel alternatives, coming simultaneously from changes in consumer demand, legislative developments and technology breakthroughs, will have a major impact on future vehicle designs.

3.2.7 Technology

Key drivers of technology are the demand for more electronics and telematics, the development of hybrid and fuel cell power systems, reduced emissions and fuel consumption leading to the development of reduced weight vehicles.

Many of the next-generation fuel-saving technologies, which will debut in the cars of the future, are currently being developed by auto suppliers. Relevant components include advanced gasoline and diesel engines, battery and related electric systems, electric motors and generators, power-split devices, and new light weight materials.

3.2.8 Skills and employment

The number of manufacturing jobs in the UK is declining. The industry is mainly male dominated with 90% of employees being "shop floor" based. The skills needed are changing as vehicles and production methods become more sophisticated. There are pressures on the workforce to become more flexible in their working practices. Automotive employers

experience skills gaps among operators, crafts persons and technicians. Employers with technical engineering skills gaps identify the most important gaps to be for CNC machine operations, assembly line/production robotics and CAD.

Leading first tier Vehicle Manufacturers (VMs) and Original Equipment Manufacturers (OEM's) are reducing the proportion of operators because of changes in technology and working practices and this will be repeated throughout the supply chain. This is compounded by the move towards high performance and lean working. There is an increasing focus on high value activities in the UK automotive industry and consequently a lower requirement for low skilled people.

3.3 The Northwest Automotive Cluster

3.3.1 Economic Profile

The core of the Northwest automotive cluster (SIC code 34) directly generates some **£6bn** of the total UK automotive manufacture economy which relates to approximately 13% of the UK total, placing it as the second most significant region for automotive manufacture. If the related industries e.g. transport and logistics, general engineering and service industries which form part of the cluster are included then this figure increases to circa **£9bn**.

During the period 2002 to 2007 there has been an estimated overall increase in turnover of circa 38% following an investment of some **£2bn** in the region's major vehicle manufacturing facilities by their owners. Turnover was forecast to increase over the next 5 years by a further 24% particularly in the regions volume car manufacturers, with the already committed further investment in the General Motors manufacturing facility at Ellesmere Port and the potential for further investment at the Jaguar/Land Rover facility, subject to future business decisions by Tata Motors. This growth is now subject to review because of the current recession and the longer term impact this might have which is uncertain at the moment.

Employment in the core of the Northwest automotive cluster is currently estimated to be approximately 23,000 and was expected to remain around this level for the next 5 years as companies seek to increase sales whilst maintaining headcount. If the related industries in the cluster e.g. transport and logistics, general engineering, sub-contract engineering and service industries are included then this figure increases to circa 40,000. This has been recently affected by the downturn in the market which is leading to significant redundancies in the short term.

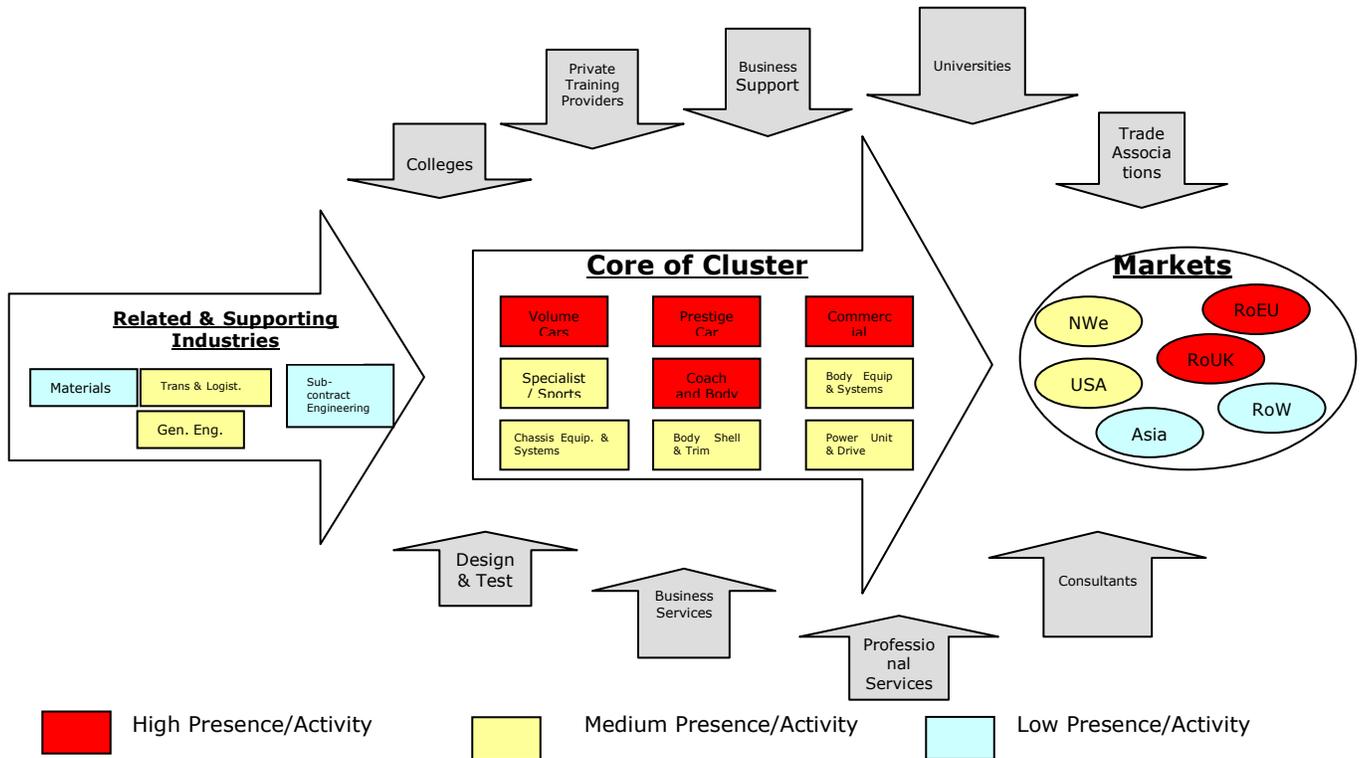
Annual output from the region in 2007 was approximately 220,000 cars and 20,000 trucks which are supplemented by truck bodies and trailers, specialist vehicles and automotive components. This was expected to rise during the next 5 years by approximately 30% mainly with the increased volumes at the General Motors Manufacturing EP facility and potential increased volumes at the Jaguar Land Rover facility. Currently output in the region is expected to drop dramatically in 2009 due to the current economic climate.

More recently the reverse takeover of East Lancs by Optare and the decision to re-locate its manufacturing base to a new larger facility in Blackburn will lead to increased output and the need for new locally based suppliers. This is one area where growth is expected to continue despite the current economic climate.

3.3.2 Size and Scope

The strength of the sector in the Northwest lies in it's diversity, ranging from volume car manufacturers, including prestige and niche car manufacturers to truck and specialist vehicle manufacturers. Figure (1) illustrates the structure and scope of the automotive cluster in the Northwest based on the industry classification system. The main strength in the region is the presence of the five vehicle manufacturers who account for approximately 70% of the total turnover and approximately 50% of the total employment in the core of the cluster.

Figure (1) Structure of the Northwest Automotive Cluster



3.3.3 Supply Chain Analysis

The supplier base in the Northwest is largely independent of the region's vehicle manufacturers with 60% of component manufacture exported outside of the region compared with a UK average of 33%.

An analysis of the supply chains of the five vehicle manufacturers shows that, with the exception of the Jaguar Land Rover Halewood Operations, which has 3 locally based integrator suppliers, and Optare who are sourcing more from within the region, the remaining VMs are tied into their parent company global sourcing strategies. Whilst this is particularly true for the General Motors Manufacturing facility at Ellesmere Port, where the majority of component supply is from mainland Europe, Leyland Trucks are looking to source more from the UK due to the current value of the pound compared with the dollar and the euro.

Figure (2) provides an indication of the location of the supply chain into the region's five vehicle manufacturers. As can be seen, with the exception of Optare, the suppliers to the regionally based vehicle manufacturers are located outside of the region and outside of the UK.

Figure (2) Location of Regional VM's Suppliers

Location of First Tier Suppliers				
Ro World				
Ro Europe	Mainly	Mainly	Mainly	Some
Ro UK	Mainly	Few	Few	Few
Northwest	Some	Few	Few	Mainly
	JLR	GMM EP	Bentley	LT
				Optare
	Vehicle Manufacturers			
	KEY:			
	Mainly	Mainly		
	Some	Some		
	Few	Few		

Conversely the regions major global tier one suppliers supply customers who are outside of the region and in many cases outside of the UK as can be seen in Figure (3). This excludes the regional based sequencers/integrators adjacent to the Jaguar Land Rover and General Motors Manufacturing plants who are only based in the region because of the presence of the VMs.

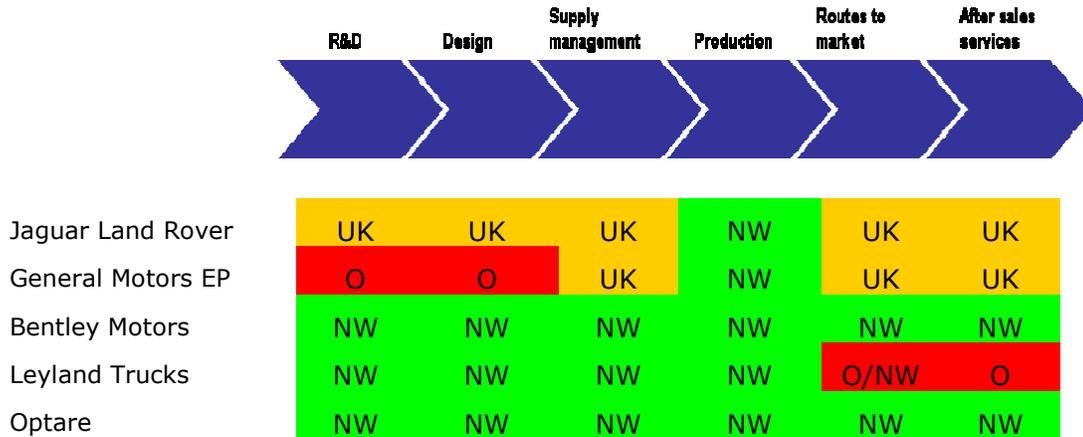
Figure (3) Location of Regional Tier 1's Customers

Customers									
Ro World									
Ro Europe		Mainly		Mainly	Few	Few	Few	Few	
Ro UK	Mainly	Few	Mainly	Few	Mainly	Mainly	Mainly	Mainly	Mainly
Northwest	Some			Few					
	Pirelli	Getrag	F-T	Delphi	Piolax	Hitachi AP	Mitras	Nichirin	Sanko Gosei
	Major 1st Tier Suppliers								
	KEY:								
	Mainly	Mainly							
	Some	Some							
	Few	Few							

3.3.4 Value Chain Analysis

The manufacturing value chain covers the whole product life cycle from research and development, design, supply management, production, route to market and to after sales service. In a global corporate manufacturing organisation it is unusual to have all elements of the value chain based in one geographical location. Figure (4) shows the location of the elements of the value chain for each of the five vehicle manufacturers located in the region.

Figure (4) Location of the Regional VM's Value Chain



KEY: NW – located in the Northwest
 UK – located elsewhere in the UK
 O - located outside of the UK

This shows that Bentley Motors (with the exception of Engine Design) have responsibility for the whole value chain and, whilst they have local responsibility for supply management, this is linked to and under the direction of the VW Group parent company. Likewise with Leyland Trucks, whilst their operations are aligned with DAF in Holland, they do have local responsibility for R&D, design and supply management. Most of their output is for DAF who are responsible for the routes to market and after sales services. Both Leyland Trucks and DAF are part of the PACCAR group. Jaguar Land Rover has recently been acquired by Tata Motors and currently all of their value chain is in the UK although regionally they only have responsibility for production. The headquarters, which deals with R&D, design, supply management, route to market and after sales, is in the West Midlands where there are two further production facilities. Optare are smaller in economic terms than the other 4 vehicle manufacturers but have a significant part of their value chain in the Northwest. They have facilities in Yorkshire but are moving more responsibility to the Northwest. They form part of the Tanfield Group which is UK based. General Motors Manufacturing EP is part of the GM Europe Group and the only part of their value chain in the Northwest is production. They are competing with their sister plants throughout Europe for the build of new models and are constantly benchmarked with the other GM European plants.

3.3.5 Business Sectors

An analysis of the Automotive Cluster in the Northwest (5) identified that, in order to develop an appropriate strategy for the cluster, it wasn't appropriate to categorise the cluster in the standard automotive industry terminology as outlined in Figure (1). An analysis of the core of the cluster indicated that there were seven "business sectors":

Business sectors (1) and (1a) cover the overseas owned global volume vehicle manufacturers with production in excess of 100k units per annum and their local based

sequencers/integrators. Companies in this sector have no responsibility locally for design, marketing, sales or component procurement. They are major employers in the region and account for approximately £3.5bn Turnover. Their local based sequencers and suppliers are only located in the region because of the presence of the vehicle manufacturers they serve.

Each of the companies is at different stages of development. The General Motors Manufacturing plant at Ellesmere Port has recently been awarded build plant status for the replacement Astra model. This, given the long term impact of the current economic climate, will increase volume at the plant to 180k units p.a. from 2009/10 which should secure the future of the plant in the medium term. The increased production at the plant will have a knock on effect to it's locally based sequencer, Syncreon, and logistics supplier and could lead to the creation of more business opportunities. In the longer term it is important that the plant is supported in terms of its people and infrastructure to help in the bidding round for the next model beyond the replacement for the Astra model.

The Jaguar/Land Rover plant on Merseyside has recently been purchased by Tata Motors. Whilst they have stated that they will support the current business plan of the company, in the longer term there is the possibility of consolidation of the 3 UK plants and potentially sourcing more components from India either directly and/or locating transplants located near to the assembly plants. The local plant is currently operating on 2 shifts and has a production schedule of around 100k units p.a. The plant has the capacity to build up to 200k units p.a. which would need the approval to take on the build of one or two new models in the Jaguar/Land Rover range. The potential increased production will have a knock on effect to it's locally based sequencers and integrators, Johnson Controls, Decoma and IASC (formerly Visteon) and logistic supplier. As with the GM plant, it is important that the Jaguar/Land Rover plant is also supported in terms of its people and infrastructure if it is to win new business within the group. In the longer term, as Jaguar Land Rover move away from their links with Ford in terms of sharing common platforms and suppliers, there will be opportunities for new suppliers.

All of the above scenarios are subject to the longer term impact of the current economic climate.

Business sector (2) covers the low/medium vehicle manufacturers with production in excess of 10k units per annum. Although global companies having overseas ownership, they have more autonomy in terms of design, sales and marketing and procurement. They are also major employers in the region and account for approximately £2.5bn Turnover.

The VW Group owned Bentley Motors plant at Crewe, after significant investment over recent years, has lead to an increase in production from 1,000 units p.a. to 10,000 units p.a. and is near full capacity. Likewise at the Paccar owned Leyland Trucks plant near Preston production has steadily increased over recent years to 22,000 units p.a. Both of these companies have invested heavily in new product and process development. In the case of Leyland Trucks they have embarked on the development of a hybrid truck for the European market. As the expansion plans of these companies develop they will be looking towards better infrastructure to manage the inflow/outflow of materials. They will also be looking to adopt some of the practices of the larger vehicle manufacturers by attracting local integrators and sequencers close to their plants. This would potentially allow transport of smaller components from tier 1 and 2 suppliers with local labour used to complete the full assemblies for line fit and sequencing.

More recently the acquisition of Optare by the Darwen Group has led to the re-location of their manufacturing facility to a new larger site in Blackburn leading to a significant increase in output. They are currently reviewing their supplier base with a view to sourcing more from local suppliers.

The vehicle manufacturers (business sectors 1 & 2) are the prime sectors for employment and economic activity in the Northwest automotive industry. Together they represent some 70% of the automotive turnover in the region and are therefore key to the future economic prosperity of the sector. To sustain their healthy presence in the region priority must be given to support and influence the business plans of their parent companies. It is therefore important that the region engages with their parent companies to demonstrate support and commitment and ensure we understand the parent company needs and plans. When bidding for new business these companies are competing with their sister plants throughout Europe and not necessarily with other vehicle manufacturers.

Any regional cluster strategy needs to include a better understanding of the infrastructure needs of these vehicle manufacturers for the future to take account of the changing Supply Chain parameters of their parent companies. Any strategy will need to recognise the growing need for inter-modal transport and logistic facilities which could include:

- Potential development of regional docks to handle the increasing quantities of material likely to be sourced outside Europe plus export of vehicles.
- Development of railheads at the vehicle manufacturers and the docks for inbound and outbound material to reduce road traffic/congestion and the carbon footprint.
- Common sequencing/sub assembly park with integrated logistics facilities to service the needs of the regional VMs

Business sector (3) covers the multi-national first tier suppliers who mainly manufacture original equipment destined for vehicle manufacturers outside of the region and within mainland Europe. They are significant employers in the region and account for approximately £1bn Turnover. They are also very vulnerable in terms of the fact that they are owned in the main by overseas global companies and are supplying customers outside of the region.

The first tier component suppliers in the region are in the main subsidiaries of multi-national component supplier companies and are typified by having customers who are global vehicle manufacturers. In the main they supply customers outside of the Northwest region and in some instances outside of the UK. They are in direct competition not only from other tier one suppliers but also from their sister companies throughout mainland Europe. They have to continually compete on price, quality and delivery performance and have the potential to win more business.

The majority of these companies are based in the Northwest for historical reasons, either attracted by grant aid available at the time, from the availability of specialist skills in the region or from previous linkages with regionally based customers. If their future presence and growth is to be maintained in the region these companies need to demonstrate their competitiveness within their corporate group. This means that they have to embrace a continuous improvement and organisational change philosophy and maintain their accreditation as tier one suppliers. The strategy for supporting these companies should be mainly targeted at developing their people and processes.

Business sector (4) covers the UK owned lower volume tier 1/2 component suppliers. They have complete autonomy in terms of design, sales, marketing and procurement. Whilst they are important to the economy of the region and potentially have the best opportunity to grow, they are potentially the most vulnerable sector, with a combined Turnover of approximately £500m.

Companies in this sector are in the main responsible for the whole of their value chain and can diversify into other markets where the emphasis is on lower volume, more complexity and where price is not necessarily the main driver. The research undertaken identified a disconnect between these locally owned tier 1/2s and the regionally based globally owned vehicle manufacturers and component suppliers. There is an identified need to improve the business processes of these companies if they are to win new business from the vehicle manufacturers and global tier 1 suppliers.

Business sector (5) covers the bodybuilders and specialist vehicle manufacturers. This area is a strength in the region and accounts for approximately £200m Turnover. Their businesses are categorised by low volume and the requirement for high technical/craft skills. They are facing increasing competition from standard models being sourced from outside of the UK. Their main need is for support in the area of development of technical competencies and product development.

Business sector (6) covers the motor-sport and accessories sector. These in the main are small companies who collectively have the opportunity to expand and develop. Their combined Turnover is approximately £40m. The sector is dominated by M-Sport who have the franchise for the Ford rally team, designing, building, racing and maintaining the Ford rally fleet. Their technologies are leading edge and there is the opportunity to share their expertise with other regionally based companies who are not in direct competition through a potential motor-sport sub-cluster.

Business sector (7) covers the automotive design and test companies with a combined Turnover of approximately £15m. The main player in this sector is mi Technology who are an independent, privately owned group delivering testing, development and consultancy services to automotive manufacturers and suppliers around the world. There is a high level of engineering expertise within this sector having the potential to assist companies with their research, development and testing needs.

3.3.6 PESTEL Analysis

	Trends and Drivers	Opportunities
Political	<p>UK government initiatives e.g. 10 year transport plan</p> <p>UK, European and global standards and legislation.</p> <p>CO2 emissions, energy, recycling and carbon legislation</p> <p>Social expectations for public services, transport system and environment.</p>	<p>Opportunities for public sector transport e.g. buses and more environmentally friendly vehicles</p>
Economic	<p>Downturn in the economy and consumption</p> <p>More trade and transport of goods</p> <p>Energy cost rises</p> <p>Lag in UK productivity compared with competitors</p>	<p>Opportunities for more sourcing from the UK</p> <p>Opportunities for integrated sequencing/logistics facilities</p> <p>Opportunities for high value added products and services</p>

		Opportunities for more commercial vehicles
Societal	<p>Growing demand for mobility</p> <p>Congestion and pressure on infrastructure</p> <p>Increasing concern for health, safety and security</p> <p>Consumer demand for variety, quality and performance</p>	<p>Opportunities for public sector transport</p> <p>Opportunities for multi model build facilities</p>
Technological	<p>Alternative more efficient and environmentally friendly power transmission systems</p> <p>Increasing performance of IC technologies</p> <p>Better materials (lighter, stronger)</p>	<p>Opportunities for innovation in fuel, engine and power systems</p> <p>Opportunities for innovation in vehicle infrastructure (ICT)</p> <p>Opportunities for innovation in materials</p>
Environmental	<p>Increased global population and associated economic development</p> <p>Increased energy consumption and greenhouse gases</p> <p>Reduction in emissions</p> <p>More efficient use of resources and minimisation of waste</p>	<p>Opportunities for innovation in fuel, engine and power systems</p> <p>Opportunities for innovation in vehicle infrastructure (ICT)</p> <p>Opportunities for innovation in materials</p>
Legislation	<p>Environmental legislation</p> <p>Passenger and pedestrian safety</p>	<p>More efficient manufacturing processes</p>

3.3.7 Strengths, Weaknesses, Opportunities and Threats

The strengths, weaknesses, opportunities and threats of the Northwest automotive sector are shown in Table (2) and are based on the findings of the Automotive Cluster Mapping Study (5).

Table (2) Strengths, Weaknesses, Opportunities and Threats

Strengths	Weaknesses
<ul style="list-style-type: none"> ❑ Cluster contributes £9bn to the Northwest economy. ❑ 5 successful global vehicle manufacturers (VMs) located in the region. ❑ Availability of trained semiskilled assembly production workers. ❑ Significant advances in employee culture change in recent years. ❑ Design capabilities of most companies except in business Sector 1. ❑ Presence of major global tier 1/2 suppliers ❑ Exporting strength of the regions' vehicle manufacturers and regionally based tier 1/2 suppliers. ❑ Strong presence of Bodybuilders and Vehicle Converters ❑ Operational performance of the regions' vehicle and component manufacturers including accreditation to TS16949. 	<ul style="list-style-type: none"> ❑ Ability of the multi-nationally owned major companies to control their own destiny (business sectors 1-3). ❑ Lack of adequate regional infrastructure to support the business plans of the vehicle manufacturers. ❑ Design authority of the volume vehicle makers lies outside the region. ❑ Absence of a Northwest supply chain to the region's vehicle manufacturers and tier 1/2 suppliers. ❑ Availability of qualified technical and skilled craft engineers. ❑ Public sector organisations not seen to be industry friendly. ❑ Inadequate business mentoring support to companies in business sectors 4-7. ❑ Little ongoing collaboration between the Northwest automotive companies and the Northwest Universities.
Opportunities	Threats
<ul style="list-style-type: none"> ❑ Potential for additional activity to support vehicle manufacturers on supplier park developments. ❑ Cascade the best practice found in the regions' major companies in the area of culture change and lean manufacturing across all business sectors to enhance productivity gains. ❑ Diversification for non vehicle manufacturers into other markets and product sectors. ❑ Promotion of the region's capabilities to seek entrance of new OEMs to the region. ❑ More inter regional and export business by better promotion. ❑ Development of commercial and specialist vehicle/motor-sport sub-clusters. 	<ul style="list-style-type: none"> ❑ Impact of current economic climate on existing businesses. ❑ Major reorganisation or closure of global Tier1/2 component suppliers. ❑ Change of ownership of multi-nationally owned companies. ❑ Global sourcing of components. ❑ Overseas sourcing to low cost manufacturing areas. ❑ Rising energy costs. ❑ Adverse exchange rates. ❑ Design capability moving outside of the region. ❑ Increased Environmental Taxes for prestige cars from Bentley, Jaguar/LR.

3.4 Future Trends

3.4.1 Logistics and Infrastructure.

The trend in the vehicle manufacturer is to outsource more of the manufacturing and assembly work to third party organisations who in the main are receiving original equipment components from tier one suppliers, undertaking sub-assembly work and delivering line side using a just in sequence operation. A significant amount of the vehicle components are sourced from "low cost" manufacturing countries and logistics requirements are often complex. As complexity and volumes increase, there will be a requirement for better logistics and sequencing facilities linked to the vehicle manufacturers with the potential of shared facilities.

3.4.2 Technology.

Alternative clean technologies are likely to continue to proliferate for the foreseeable future as governments and manufacturers have increasing pressure placed upon them to reduce emissions, which will in turn impact on the styling of cars. Future vehicle design and manufacture will need to respond to environmental concerns such as fuel efficiency, greenhouse gas emissions, material recycling and re-use, noise pollution, and traffic congestion. There will be more emphasis on road safety in terms of safer road infrastructure and safer vehicles. The ability to defend and/or gain market share in the global automotive industry will also be a major challenge as the sector looks to consolidate.

3.4.3 Design and Manufacturing Processes.

The time to bring a new model to market from design to production will be reduced dramatically. More sophisticated virtual engineering tools for all aspects of vehicle design will enable the target of “zero prototypes to job 1” to be achieved. Advanced manufacturing methods will enable manufacturers to take advantage of new materials and structures. There will be more development of multi-purpose manufacturing facilities capable of servicing the needs of more than one model range with the potential to extend this beyond even one vehicle manufacturer.

4. Cluster Vision

Following consultation with the industry in the region the NAA have developed a vision for the automotive cluster in the Northwest which can be summarised as:

“A globally competitive cluster with World Class standards of excellence in Manufacture, Engineering, Supply Chain Management, Innovation and Workforce Skills.”

The vision is converted to reality by a strategy and a set of activities that is supported and led by the industry and is informed by the recent mapping study (5), IfM report (6) the AIGT report (1) and the parliamentary report, The success and failure in the UK car manufacturing industry (7), which has highlighted deficiencies in supply chain competitiveness, the age of UK manufacturing plants and skills gaps as areas for concern whilst cites the UK research and development activities as being internationally respected. It states that the long-term challenge for the industry in the UK (within the global market) will be to focus on high value-added processes and products and to utilise the UK’s significant strength in automotive design and innovation and it’s skilled and flexible labour force.

The strategy for achieving the vision for the automotive sector in the Northwest builds on the strengths in the region, addresses the weaknesses, develops the opportunities and responds to the threats.

Based on an analysis, set in the context of the industry issues, trends and drivers, the following objectives have been identified for the future economic development of the cluster:

- Support the cluster through the current economic situation.
- Ensure the continued presence of and future investment in the regions automotive manufacturing community
- Be recognised nationally and internationally as a premier location for automotive manufacture

- Develop a world-class automotive supply base that can compete in the global market
- Exploit the region's expertise which is relevant to the present and future manufacture of vehicles and automotive components.
- Ensure that the companies within the cluster respond effectively to the global environmental agenda

In the current economic climate it is difficult to have a long term (20 year) vision for the cluster. In the short term there is a need to sustain the core of the cluster and ensure that it is prepared for any future upturn in the economy. It is important to understand the impact that the recession is having in our regional companies and to work with stakeholders to ensure that where possible relevant support is provided.

In the medium term there will be more business opportunities for 2nd and 3rd tier suppliers in the region as the UK becomes more competitive in the global manufacturing market. There is a key role for the cluster organisation to play in assisting these companies improve their manufacturing performance so that they can become more competitive.

In the longer term the drivers of the economic performance of the cluster will be the new technologies which will form the basis of future vehicles. It is important that the regional capabilities are harnessed to exploit these new technologies. An opportunity where the region can take a lead is in the commercial vehicle sector where the region has a strength. Both Leyland Trucks and Optare are currently developing hybrid vehicles and are not in direct competition. There is the potential for a collaborative development programme between these companies supported by first tier high technology suppliers such as Torotrak, Scorpion, mi Technology supported by the expertise within the regional university base.

The one thing that is certain is that the cluster will be different following any upturn after the current downturn. What it will look like will be dependent upon a number of factors. An **optimistic vision** of what the cluster might look like in the future is:

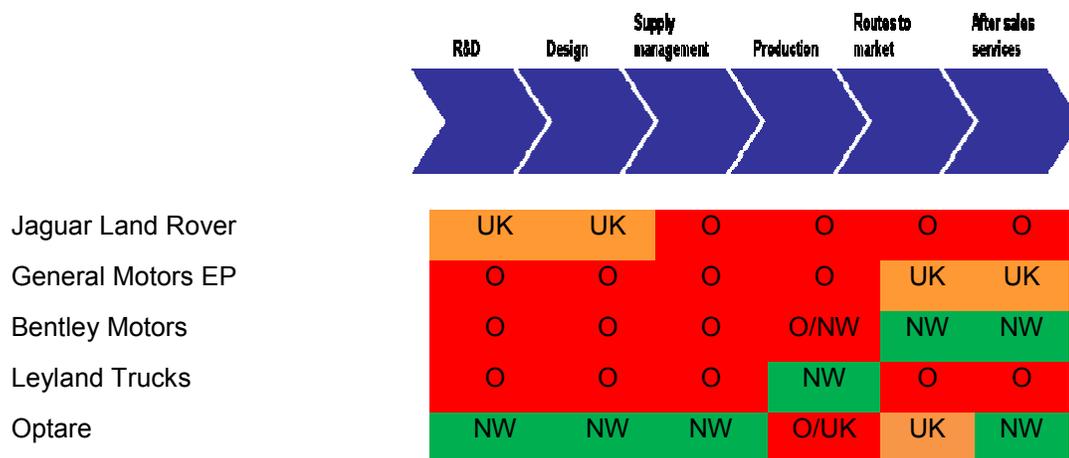
- The current vehicle manufacturers maintaining a presence in the region, working at full capacity and receiving continued investment in new products/models by their parent companies.
- The presence of new tier 1 suppliers in the region to support the growth of and reflecting changes in the regional vehicle manufacturers.
- A shared integrated sequencing/logistics park servicing the regions' vehicle manufacturers with the necessary infrastructure to support this.
- Increased local sourcing by tier 1's on the back of significant improvements in the competitiveness of regional tier 2/3 suppliers.
- Significant collaborative networks of vehicle manufacturers, SMEs and universities working together in the area of low carbon vehicle technologies supported by TSB and Framework funding.
- Demonstrator sub-regions of the Northwest and projects with a centre of excellence supporting the low carbon transport technologies.
- Regional SMEs linked to a European network of companies sharing and exchanging best practice and collaborating on pan-European innovation projects.

A **pessimistic vision** of what the cluster might look like in the future is:

- Closure of production at Jaguar Land Rover with all production moved overseas and only R&D/Design retained in the UK in the West Midlands.
- Closure of the General Motors Manufacturing EP plant with the UK (Luton) only responsible for UK sales and service.
- Significant Bentley Motors functionality re-located to Germany along with a larger percentage of manufacturing.
- Direct links between Leyland Trucks and Paccar removed with all functions apart from light truck production transferred to DAF in Holland.
- Optare production moved out of region/overseas with only R&D/Design , supply management and after sales/service retained in the NW.

Figure (5) shows what the Northwest Value Chain would look like as a consequence of the above happening.:

Figure (5) Possible Future Northwest Value Chains of VMs



5. Strategic Themes

The automotive industry is being badly affected by the current economic downturn with regional based vehicle manufacturers reporting reductions in production schedules by as much as 50% with no indication of levelling out in the market at the time of writing. Whilst this is a global situation and regionally we can have little control over this we do need to understand the local impact that this is having and provide support where possible. We also need to prepare companies for a future upturn in the market.

There is confusion amongst companies as to what support is available, who can support them and where they need to go for help. Very often more than one public sector organisation is liaising with the same company without the knowledge of who else from the public sector is speaking and supporting that company. This is leading to confusion and wasted resource. Strategic theme one identifies the need to support the regional companies through the current situation and prepare them for a future upturn.

ST1 Support the regional sector through the current economic situation by,

- 1.1 understanding the impact it is having and provide support where possible**
- 1.2 preparing the sector for a future upturn**
- 1.3 ensuring all public sector support is co-ordinated and customer focused**

If the predicted levels of increased output are to be achieved in the medium term and if the global sourcing by the vehicle manufacturers continues as expected, there will be more material flow into and out of the region. This together with the continued trend to outsource sub assembly work to third party organisations, to offset the direct costs to the vehicle manufacturer, will lead to the need for improved regional sequencing and logistics facilities and infrastructure.

Whilst the availability of semi skilled workers is not a problem in the region, there is a current and future need for people with more technical capability. As the technology requirements for future vehicles increases then this will need to be reflected in the skill level abilities of the workforce.

The globally owned vehicle manufacturers and component suppliers based in our region collectively are responsible for approximately 70% of the turnover in the sector. It is important that their parent companies, when they are looking at future investment in the European market, choose the regionally based plants to invest in. Strategic theme two focuses on the need to enhance and support the current supply chains in terms of infrastructure, facilities, skills and continued investment into existing companies.

ST2 Enhance current supply chains by,

- 2.1 enhancing the logistics capability of the vehicle manufacturers**
- 2.2 providing the right infrastructure and facilities**
- 2.3 developing people with the right skills**
- 2.4 supporting continued investment in the regional companies**

Europe is seen as one market by the vehicle manufacturers and they will locate their facilities in a region which provides the best value in terms of cost, quality and delivery. The UK is attractive as a location for non-European vehicle manufacturers who do not currently have a presence in Europe for a number of reasons: english speaking, employment laws and current exchange rates. Whilst there is over-capacity world-wide there are opportunities for attracting new-inward investment by foreign owned vehicle and component manufacturers.

The region is quite diverse and has areas of key strengths and capabilities. These need to be marketed and promoted more widely if we are to increase the level of trade and investment by our companies. The region has world-class competencies and capabilities in manufacturing. The Jaguar Land Rover plant was voted best Ford plant by it's previous owners and has best practice in terms of lean manufacturing as exemplified by its Lean Learning Academy. Getrag and Leyland Trucks have both embraced change and are seen as best practice in terms of team working and employee engagement. Bentley Motors have specialist world-class skills in interior trim and finish.

There is however a disconnect between the regional knowledge base and those companies in the region who are looking for expert input from those that have the knowledge. This is particularly true of companies who are innovating new products and processes and are

unaware of the region's capabilities in this area. The region has a first class university base which is researching in the areas of the new technologies required by the industry and this needs to be promoted and exploited to the benefit of all.

Strategic theme three highlights the need to develop future value chains by exploiting the regions capability in new and emerging technologies, sharing best practice and supporting new inward investment.

ST3 Develop future value chains by,

- 3.1 exploiting new/emerging technologies,**
- 3.2 building on and exploiting regional competencies**
- 3.3 facilitating collaborative networks**
- 3.4 supporting inward investment**

Environmental legislation is driving innovation and change within the sector. This not only impacts on the design of products and processes but is forcing companies to be more efficient and effective in the usage of valuable resources and the disposal and minimisation of their waste products. Strategic them four responds to the environmental agenda which impacts on our companies.

ST4 Respond to the environmental agenda by supporting companies to,

- 4.1 use resources efficiently**
- 4.2 minimise waste**
- 4.3 respond to climate change**

6. Activities to Deliver the Strategy

6.1 Activities

The role of the regional cluster organisation (NAA) is to identify the sector needs, develop a strategy to respond to those needs and work with stakeholders to deliver activities which implement the strategy. In order to ensure that the strategy and its implementation is industry led, working groups will be established having representation from key stakeholders and chaired by a relevant industry member of the NAA Board. Initial nominations have been received from key representatives of the cluster companies to champion and be involved in developing projects which will support the delivery of these activities. These working groups will report into the NAA Board who will have overall responsibility for the strategy. The working groups will develop a rolling 3 year action plan which draws upon relevant regional initiatives/organisations and involves partnerships with key stakeholders to deliver specific project activity.

The activities which will deliver the strategy is shown Table (3) below. These activities will inform a three year rolling action plan which will be reviewed on an annual basis. A ten year High Level Activity Plan is included in Appendix (2).

Table (3) Activities to Deliver the Strategy

Strategic Themes		Activities
ST1	Support the regional sector through the current economic situation by understanding the impact it is having and preparing the sector for a future upturn.	Monitor the impact that the current economic situation is having on companies in the region and report and lobby for support.
		Facilitate support where appropriate ensuring a joined up approach
		Establish and support a network of tier 2 and 3 companies to share issues and best practice.
ST2	Enhance current supply chains by, enhancing the logistics capability of the vehicle manufacturers, providing the right infrastructure and facilities, developing people with the right skills and supporting continued investment in the regional companies.	Identify the current and future infrastructure needs of the vehicle manufacturers and put in place an action plan to respond to those needs.
		Map the current vehicle manufacturers' and tier one suppliers' value chains in order to identify capabilities, competencies and gaps in the provision.
		Re-establish the industry led skills working group, facilitated by the NAA, to develop and oversee the delivery of an action plan which will establish the current baseline of skills levels in the sector and future skills needs
		Develop people with the necessary skills and knowledge to work in a modern automotive manufacturing environment
		Work with relevant organisations to improve the image of and recruitment to the automotive sector.
		Work with relevant organisations to establish and retain better technical graduate provision in the region.
		Support companies to understand and implement business process and product/service innovation both internally and within their supply chains.
		Promote and share best practice with the region's automotive companies using regional competencies as exemplars.
		Monitor and report on improvements made in the competitiveness and performance of the Northwest automotive sector and benchmark against the rest of the UK and other established automotive markets e.g. EU, USA and Japan.

		Facilitate supplier network events in areas which support the needs of the Northwest automotive companies
ST3	Develop future value chains by, exploiting new/emerging technologies, building on and exploiting regional competencies, facilitating collaborative networks and supporting inward investment	Promote and market the region's automotive manufacturing capabilities to key automotive markets throughout the world
		Work with relevant organisations to promote the region to existing and potentially new inward investment companies.
		Establish the product and process innovation needs of companies in the cluster
		Identify the product and process innovation capabilities in the region.
		Develop better linkages between the region's knowledge base and the automotive manufacturing community to support the exploitation of new technologies for future vehicles.
		Support collaborative R&D initiatives between the Northwest knowledge base and the automotive companies in the region.
ST4	Respond to the environmental agenda by supporting companies to, use resources efficiently, minimise waste and respond to climate change	Support companies in their activities which seek to respond to environmental legislation
		Assist companies to improve their business resource efficiency and waste management

6.2 Alignment with Regional Manufacturing and Economic Strategies

The alignment of the strategy with the RES Transformational Actions and Northwest Manufacturing Strategy is shown in Table (4).

Table (4) Alignment of the Strategy with RES Transformational Actions and Northwest Manufacturing Strategy

Automotive Cluster Strategic Themes	RES 2006 – 2009 Transformational Actions	Northwest Manufacturing Strategic Framework
<p>Manage the regional sector through the current economic situation by understanding the impact it is having, preparing the sector for a future upturn and ensuring that all public sector support is co-ordinated and customer focused.</p> <p>Enhance current supply chains by, enhancing the logistics capability of the vehicle manufacturers, providing the right infrastructure and facilities, developing people with the right skills and supporting continued investment in the regional companies.</p> <p>Develop future value chains by, exploiting new/emerging technologies, building on and exploiting regional competencies, facilitating collaborative networks and supporting inward investment</p> <p>Respond to the environmental agenda by supporting companies to, use resources efficiently, minimise waste and respond to climate change</p>	<p>Support new and existing businesses to develop productivity, enterprise and skill levels</p> <p>Help businesses to work smarter and innovate</p> <p>Develop and exploit the science/HEI base</p> <p>Help companies respond to global opportunities/risks</p> <p>Support businesses to use resources efficiently, minimise waste and respond to climate change</p> <p>Develop intermediate/ higher level skills and attainment</p> <p>Develop management/ leadership and corporate social responsibility skills</p> <p>Develop higher value activity and improve productivity in key sectors</p>	<p>Increasing capacity and capability to innovate</p> <p>Improving the interaction of businesses and HEIs on manufacturing issues Improving access to actionable market information</p> <p>Increasing new enterprises in manufacturing</p> <p>Ensuring a highly skilled workforce at all levels Improve the image of manufacturing</p> <p>Ensuring that places, spaces and infrastructure are fit for purpose of manufacturing</p>

6.3 Indicators of Achievement

The achieved impact that the strategy will have as mapped across the regional output tasking framework is expected to be in terms of:

- Increased turnover and GVA in the cluster
- Increased output from the vehicle and component manufacturers
- Increased overseas export
- Companies attending best practice network events/programmes
- Companies participating in supply chain development programmes
- Fully functional web-site with significant number of companies registered
- Number of SME companies achieving business excellence standards
- Number of companies supported at international trade fairs/events
- Number of new inward investment opportunities supported
- Number of companies supported with projects with Northwest universities
- Number of companies reducing their energy consumption, waste and carbon footprint.
- Number of employees supported with their up-skilling needs
- Number of publications in relevant press/publications

7. References

- (1) The Automotive Innovation Growth Team Report, May 2002
- (2) Foresight Vehicle Technology Roadmap, Version 2, 2004
- (3) Northwest Regional Economic Strategy (RES), 2006 – 2009
- (4) Raising the Competitiveness and Profile of The North West Automotive Sector, April 2003 (NAA Original Business Plan)
- (5) The North West Automotive Industry Cluster Mapping Study, March 2002
- (6) The North West Automotive Cluster Mapping Study, January 2008
- (7) Institute for Manufacturing, Cambridge University, Report, December 2008
- (8) The success and failure in the UK car manufacturing industry, March 2007
- (9) Northwest Manufacturing Strategy, 2008

The findings from the mapping study undertaken in 2007 (5) and the additional work undertaken by the Institute for Manufacturing at Cambridge University (6) together with intelligence gathered regionally, nationally and globally regarding the issues, drivers and future trends in the sector have informed the strategy. The evidence gathered is summarised below:

STRATEGIC CONTEXT

- The current downturn in the economy is having a major impact in the sector and is effecting the whole of the supply chain.
- The VMs and their related support companies are the prime sectors for employment and economic activity. They are also under significant threat and need to maintain their competitive position within their parent company group.
- To maintain employment levels, it will be necessary to attract new businesses into the region.
- Multi-nationally owned Tier 1's are under threat regarding future investments since the majority of them supply out of the region and in some cases outside of the UK.
- The smaller companies are in the main locally owned and can determine their own strategy.
- Public Sector initiatives are fragmented, reactive and confusing, with awareness limited to vehicle manufacturers.

CLUSTER CONFIGURATION/STRUCTURE

- The traditional industry classification for the Northwest automotive cluster would benefit from alternative perspectives based on their value chain footprint and supply network configuration.
- The majority of the automotive companies in the Northwest work independently of each other.
- There is significant variation in the material and financial flows in and out of the region's vehicle manufacturers and consequently their contribution to regional/national value-add.
- Tier 2 companies are increasingly located outside the region.
- The value-chain of smaller firms is within the region, but amongst the larger vehicle manufacturers it varies considerably with some having either a national or European footprint.
- Logistics and infrastructure is of particular interest to vehicle manufacturers but not at Tier 1 or below.

CLUSTER CAPABILITIES/COMPETENCIES

- Innovation is seen as well managed at company level, but regional innovation capability is seen as a weakness, with no regional strategy.
- There is potential to use current regional competencies in just in sequence (JIS) capability to promote more local outsourcing,
- There is a skills deficit at graduate engineer and technician level, although numbers suggest a 'cohort' scale approach is required to develop a highly skilled group to support the regional needs.
- There is a need to upgrade the business processes of Tier 1's (and Tier's 2/3's); this is recognised by both the vehicle manufacturers and the Tier 1's themselves.
- There is a lack of knowledge on the capability of the Northwest automotive sector.
- There are exemplar supply chain competencies within the Northwest which should be shared with non-competing partners.

Appendix 2 Activity Plan 2009 – 2019

Strategic Theme	Theme Area	Activity	Key Stakeholders (excluding NAA and Companies)	Timescales Short = 1 to 2 years Medium = 2 to 5 years Long = 5 to 10 years	Measures of Success	Comments
ST1: Manage the regional sector through the current economic situation by, understanding the impact it is having and provide support where possible, preparing the sector for a future upturn, ensuring all public sector support is co-ordinated and customer	Economy	Monitor the impact that the current economic situation is having on companies in the region and report and lobby support.	NWDA, NWBL, SRPs,	Short/Medium	Better market intelligence to inform actions Continued investment into the regionally based global automotive companies by their parent companies. More informed companies better able to cope with current the s	It is important that the impact of the current economic situation is monitored so that pro-active support can be given to our companies. It is proposed that a task group is established of key stakeholders who collectively are able to gather information,
		Facilitate support where appropriate ensuring a joined up approach	NWDA, NWBL, SRPs	Short/Medium		
		Establish and support a network of tier 2 and 3 companies to share issues and best practice	NWBL, NWDA	Short/Medium		
ST2: Enhance current supply chains by, enhancing the logistics capability of the vehicle manufacturers, providing the right infrastructure and facilities, developing people with the right skills, supporting continued investment in the regional based compa	Supply Chain Competitiveness	Identify the current and future infrastructure needs of the vehicle manufacturers and put in place an action plan to respond to those needs.	NWDA	Short	Continued investment into the regionally based global automotive companies by their parent companies. Increased GVA of the cluster. Increased output from vehicle manufacturers and component manufacturers	These activities are specifically about supporting and developing the supply chains of our regional companies. Actions are already in place which are being facilitated through our Automotive Advanced Supply Chain Programme. This will be enhanced by our pr
		Map the current vehicle manufacturers' and tier one suppliers' value chains in order to identify capabilities, competencies and gaps in the provision.	NWDA	Short		
		Support companies to understand and implement business process and product/service innovation both internally and within their supply chains.	NWBL, NWDA	Long		
		Promote and share best practice with the region's automotive companies using regional competencies as exemplars.	NWDA	Long		
		Facilitate supplier network events in areas which support the needs of the Northwest automotive companies	NWBL, NWDA	Long		
		Monitor and report on improvements made in the competitiveness and performance of the Northwest automotive sector and benchmark against the rest of the UK and other established automotive markets e.g. EU, USA and Japan.	NWDA	Long		
	Skills	Re-establish the industry led skills working group, facilitated by the NAA, to develop and oversee the delivery of an action plan which will establish the current baseline skills level and future skills needs	NWDA, LSC, NSAM, SEMTA, NWUA	Short	Increased level of employee skills relevant to the current and future needs of companies in the cluster	These activities were previously supported by the Automotive SSPA which has been disbanded due to lack of resource. There is a need to resurrect an automotive skills group with representation from key stakeholders.
		Develop people with the necessary skills and knowledge to work in a modern automotive manufacturing environment	NWDA, NSAM, SEMTA	Long		
		Work with relevant organisations to improve the image of and recruitment to the automotive sector.	SEMTA, NSAM	Long		

ST3: Develop future value chains by, exploiting new/emerging technologies, building on and exploiting regional competencies, facilitating collaborative networks, supporting inward investment	Internationalisation	Promote and market the region's automotive manufacturing capabilities to key automotive markets throughout the world	UKTI, SMMT	Long	Increased level of overseas exports New inward investment into the region. Increased GVA of the cluster. Increased output from vehicle manufacturers and component manufacturers in the region.	Although we have developed a good working relationship with UKTI and SMMT we need to develop a long term marketing and promotion strategy for our sector and establish links with other key automotive regions both national and international using the Euro
		Work with relevant organisations to promote the region to existing and potentially new inward investment companies.	NWDA, UKTI	Long		
	Innovation	Establish the product and process innovation needs of companies in the cluster	NWDA, NWUA	Short/Medium	Engagement of companies and universities with technology development initiatives relevant to the design, development and manufacture of future vehicles and the infrastructure required to support future vehicles.	We are currently developing an innovation strategy for the region and are developing a road map of capabilities and competencies. This needs to be developed into an action plan which is overseen by an innovation working group of key stakeholders.
		Identify the product and process innovation capabilities in the region.	NWUA	Short		
		Develop better linkages between the region's knowledge base and the automotive manufacturing community to support the exploitation of new technologies for future vehicles.	NWUA, NWDA	Long		
		Support collaborative R&D initiatives between the Northwest knowledge base and the automotive companies in the region.	NWDA, NWUA	Long		
	ST4: Respond to the environmental agenda by supporting companies to, use resources efficiently, minimise waste, respond to climate change	Environment	Support companies in their activities which seek to respond to environmental legislation	SMMT, NWDA	Long	Improved use of resources and reduced levels of waste.
Assist companies to improve their business resource efficiency and waste management			Enworks, Envirolink, NWDA	Long		

NAA
NWDA
NWUA
NWBL
UKTI
SMMT
SRPs
NSAM
SEMTA
Enworks
Envirolink

Northwest Automotive Alliance
Northwest Development Agency
Northwest Universities Association
Northwest Business Link
UK Trade and Investment
Society of Motor Manufacturers and Traders
Sub-regional partners
National Skills Academy Manufacturing
Sector Skills Council for Engineering
Regional Environmental support organisation
Environmental Technologies RCO