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Executive Summary

The purpose of this report is to present the results from the recent mapping study undertaken of the Northwest automotive cluster with the objective of supporting the development of a pro-active strategy to develop and sustain the automotive industry in the region.

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 12% 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 services industries 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** during this period in the region's major vehicle manufacturing facilities by their owners. There is the potential for turnover to increase over the next 5 years by a further estimated 25% particularly in business sector 1, with the already committed further investment in the Vauxhall Motors facility and the potential for further investment at the Jaguar/Land Rover facility, dependent upon future business decisions by their global owners.

Employment in the core of the Northwest automotive cluster is currently estimated to be approximately 23,000 and is expected to remain around this level for the next 5 years as companies seek to increase sales whilst maintaining employment levels. If the related industries e.g. transport and logistics, general engineering and services industries are included then this figure increases to circa 40,000 employees.

Annual output from the region is currently approximately 220,000 cars and 20,000 trucks which are supplemented by truck bodies and trailers, specialist vehicles and automotive components. With continued support and investment this could rise during the next 5 years by approximately 30% with the planned increased volumes at the Vauxhall Motors facility and potential increased volumes at the Jaguar Land Rover and Leyland Trucks facilities. Further investment will be needed during this period, primarily by the vehicle manufacturers, to upgrade their facilities and renew their products

The accepted definition of a cluster according to Porter (1) is:

"A geographic concentration of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions (e.g. universities and trade associations) that compete and also co-operate."

This report concludes that the automotive companies surveyed in the Northwest can be divided into 7 business sectors for the purpose of analysis as follows:

- Sector 1: Volume vehicle manufacturers with production in excess of 100k units per annum
- Sector 1a: Local support companies for volume vehicle manufacturers
- Sector 2: Low/medium vehicle manufacturers with production in excess of 10k units per annum
- Sector 3: Tier 1/2 component suppliers who are owned by multi-national companies
- Sector 4: UK owned lower volume Tier 1/2 component suppliers
- Sector 5: Vehicle converters and bodybuilders.
- Sector 6: Motorsport and accessories
- Sector 7: Design/test companies

Except for the volume vehicle manufacturers in business sector 1 and their local integrators /sequencers in business sector 1a there are no true business clusters in the region since all of the other companies have very few links with other Northwest automotive companies and generally operate independently of each other.

A total of 40 companies were visited as part of the study having a combined headcount of 18,000 representing some 80% of the employment base within the core of the Northwest automotive manufacture industry.

The companies were asked to complete a mapping proforma to establish information on the industry, in particular to identify:

- Past 5 years performance and future plans
- Profile of their customers and suppliers
- Company ownership and functional responsibilities
- Opportunities and threats to their continuing existence in the Northwest
- Main areas for improvement needed for sustainability of their competitiveness
- Skills gaps and recruitment/retention issues
- Innovation activities and opportunities

The level of detail in the responses obtained during the interviews was variable and further reviews may be necessary to develop more specific details and company requirements.

The report analyses the key business parameters and company strategies relevant to the identified business sectors. There are, however, certain key themes which are common to most of the business sectors.

The Northwest automotive industry has generally responded well to the ongoing global pressures throughout the industry during the last 5 years. All companies have had to take action to significantly improve labour productivity and the need for culture change is now being cascaded down the supply chain as a necessary enhancement to improving productivity in the years ahead. Material cost pressures are relentless which has resulted in nearly all material being sourced outside of the region and increasingly, outside of the UK, often to Eastern Europe.

Marketing and sales responsibility is not within the remit of the multi-national Northwest companies except for Bentley Motors. The regionally owned companies are seeking to diversify their customer base to include non-automotive activity and to provide better added value through service, delivery, quality and specialisation such that price is not the key selling feature.

Except for the volume manufacturers in business sector 1 and their integrators/sequencers in business sector 1a, most of the Northwest companies have research and development activities which are a critical element to their future success. Recruitment of engineers is a major challenge for most of these companies. The development of graduate and technical apprenticeships is vital with help needed to establish the most appropriate programmes.
Each company has its own plans for the future which need to be self-sustaining and profitable. However assistance is often needed from public sector authorities to allow the companies to deliver their plans. A more pro-active approach is requested by many companies to help them with their land, infrastructure and skills development challenges.

The strengths, weaknesses, opportunities and threats identified in the study are shown in the table below:

Strengths

- Cluster contributes £9bn to the Northwest economy
- 4 successful and growing 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

Opportunities

- 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 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 specialist vehicle and motorsport sub-cluster

Weaknesses

- Ability of the multi-nationally owned major com panies to control their own destiny (business sectors1-3)
- 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 indus try friendly
- Inadequate business mentoring support to com panies in business sectors 4-.
- Little ongoing collaboration between the Northwest automotive companies and the Northwest Universities

Threats

- 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/Land Rover

The report makes 8 recommendations:

Recommendation 1:

The vehicle manufacturers (business sectors 1 & 2) are the prime sectors for employment and economic activity in the Northwest automotive industry. To sustain their healthy presence in the region, priority must be given to adopting a more pro-active approach to support the companies' business plans.

It is recommended that a detailed study should be undertaken of the infrastructure needs of the Northwest automotive industry for the future to take account of the changing Supply Chain parameters of the multinational companies. This will need to recognise the growing need for inter-modal transport and logistic facilities. This study should 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 manu facturers and the docks for inbound and outbound material to reduce road traffic/congestion and the carbon footprint
- Planning approvals for expansion and facility relocations including further development of supplier parks

Recommendation 2:

There is a shortage of technically competent engineers with all companies finding recruitment difficult. To sustain the industry a stream of new engineers is needed. Whilst external recruitment will continue, it is recommended that programmes for training graduate, technical and craft engineers is reviewed to ensure that the content and financial support is optimised.

Recommendation 3:

It is considered that all companies need to have active "Culture Change" programmes. These have been ongoing for some time in the vehicle manufacturers and it is recommended that a plan to cascade the programmes into all Northwest automotive companies should be developed.

Recommendation 4:

Current business mentoring is in most instances inadequate. It is recommended that a more effective mentoring support scheme is developed and implemented. In particular, this is required in the smaller business sectors 4-7, with potentially some of the trained mentors coming from the larger companies in business sectors 1-3.

Recommendation 5:

To promote the region's automotive capabilities to generate more trade within the region and export opportunities outside of the region, it is recommended that an Automotive Cluster Marketing Plan is developed and implemented.

Recommendation 6:

If the Northwest automotive industry is to maintain its headcount it will need to attract new businesses into the region. It is recommended that plans are developed to promote the region to potential new entrant OEM's from non European countries such as India & China. This will require a specific promotional programme for the region including attendance at Trade Fairs.

Recommendation 7:

Many of the companies surveyed were not aware of the potential range of business support activities available to them. There needs to be much better awareness of Public Sector support to the industry and it is recommended that a clear listing of all the agencies' programmes is prepared for use by the companies in the Northwest automotive industry.

Recommendation 8:

As there is little evidence of on-going collaboration between Northwest automotive companies and the region's universities, it is recommended that a study is undertaken to identify regional company needs for academic/expertise input to their product and process innovation requirements. The study also needs to identify the Northwest universities' capabilities to meet these needs so that areas of mutual benefit can be developed on a long term basis.

1. Introduction

1.1. Background

The strategy for supporting the Automotive manufacturing industry in the UK has been based on the recommendations arising from the Automotive Innovation and Growth Team Report (2), delivered on a regional basis by organisations similar to the Northwest Automotive Alliance (NAA). In addition, the strategy in the Northwest is aligned with the Northwest Development Agency (NWDA) Regional Economic Strategy 2006-2009, Transformational Actions (3). More specifically to:

1. Support new and existing businesses to develop productivity, enterprise and skill levels
2. Help businesses to work smarter and innovate
3. Help companies respond to global opportunities/risks
4. Support businesses to use resources efficiently, minimise waste and respond to climate change
5. Develop intermediate/higher level skills and attainment
6. Develop management/leadership and corpo rate social responsibility skills
7. Develop higher value activity and improve productivity in key sectors
8. Develop and exploit the science/HEI base

This strategy focuses on a number of areas all aimed at improving the competitiveness of Northwest based automotive manufacturing companies.

A business plan (4) for the formation and development of the Northwest Automotive Alliance 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. This was endorsed by the industry led NAA Board who have overseen the implementation of that strategy and action plan to date.

The NAA, under the guidance of the NWDA, have undertaken a mapping exercise of the Northwest automotive cluster with the intention of formulating a development strategy for the cluster covering the period 2007 to 2012. The focus has been to evaluate the evolution of the cluster over the last 5 years (since the last cluster review in 2002), identifying the key reasons for the successes and failures. As part of the process, a view of the expected changes over the next 5 years has been developed by identifying the key drivers, risks and opportunities to the sector.

From this mapping study a support strategy for the cluster will be developed that is most appropriate and which will ensure maximum effectiveness for growth potential. This report represents the findings from the mapping study and puts forward recommendations to be considered by the NAA and NWDA for implementation.

1.2. Purpose of the Study

The previous mapping study was carried out in 2002 and the findings and recommendations from that report have been used by the NAA in terms of its strategy to support the automotive industry in the Northwest to date. The NAA Business Plan which underpinned that strategy now needs updating and as part to the process it was deemed important that the profile of the automotive industry in the Northwest was updated. This mapping study is a response to that need. The findings and recommendations from the study will be used to develop a Strategy and Action Plan for the period 2007 to 2012.

1.3. Aim and Objectives

The aim of the mapping study is to identify the history, profile, opportunities and threats to the automotive industry in the Northwest of the UK in order to help inform the development of a pro-active strategy and action plan which will support those industries and aligns with the Regional Economic Strategy (3).

The specific objectives which support this aim are to:

1. Understand how the cluster has developed over the last 5 years (2002 to 2007), identify the main reasons for company successes and failures during this period and the key reasons for the changes made by these companies

2. Understand the future business plans of the com panies and their expectations for the next 5 years in order to develop a picture of what the cluster would look like through to 2012

3. Profile the customers, domestic sales and exports of the companies

4. Understand the ownership and structure of the companies in the cluster, including responsibility for research, design and development, sales and marketing and sourcing

5. Establish what are the opportunities and threats to the companies in the areas of, for example, technology & competition (in-house or external)

6. Identify what the main areas of improvement/need for change are that the com panies will have to implement to protect their business and assist growth

7. Identify the main skills gaps and recruitment and retention issues which the companies have

1.4. Methodology

Some 40 automotive companies were selected to participate in the mapping study (see Table 2) which was considered to be a representative sample of the core of the cluster. A proforma was developed which was used as a guide during a visit to each company at a senior level. Areas covered during the visit were, company profile, including historical changes, future plans, issues and concerns, functional responsibility, innovation, skills and recruitment

Other statistical data and related information was gathered from a range of sources, in particular the Department of Trade and Industry Auto-industry website (www.autoindustry.co.uk) and the Society of Motor Manufacturers and Traders website (www.smmt.co.uk)

The results were analysed and the findings are summarised in this report together with recommendations for action by the NAA/NWDA

2. Size and Scope of the Cluster

2.1. Size and Classification

The definition of the automotive industry in the Northwest, as covered by this study, is: everything up stream of vehicle manufacture extending upstream as far as vehicle conversions. It does not cover anything downstream of vehicle making such as car retailing and after market services and supplies.

Based upon DTI statistics (6), the Northwest automotive industry accounts for 12% of the total UK automotive (SIC 34) sales which represents the second highest sales turnover of all the UK regions. With over 500 companies and 4% of the region's manufacturing GDP, the automotive cluster is important to the region and the UK's economy.

The core of the cluster as defined by SIC 34 comprises approximately 200 companies, with employment in these companies circa 23,000 and a turnover in excess of £6bn. If other related industries and service organisations which support the companies at the core of the cluster are included then this figure rises to some 500 companies employing circa 40,000 people with a turnover of circa £9bn. The North West has more vehicle makers than any other UK region, except for the West Midlands, with major companies such as the Ford Motor Company's Jaguar/Land Rover plant at Halewood and the Getrag Transmission plant also on Merseyside, General Motors' Vauxhall Motors plant at Ellesmere Port, the Volkswagen Group's

Bentley Motors plant at Crewe and the PACCAR Leyland Trucks plant at Leyland.

The same industry statistics illustrate that the region has fallen behind in productivity and is suffering, as are the other key automotive regions in the UK, from the effects of global restructuring of the automotive industry. It is estimated that there is currently a global overcapacity of some 30% with UK production reducing by some 2.6% over the last two years mainly due to the closure of the Rover facility in the West Midlands.

The strength of the sector in the Northwest lies in its diversity, ranging from volume car manufacturers, including prestige and racing/rally car manufacturers to truck and specialist vehicle manufacturers. 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%.

The four multinational vehicle manufacturers (Bentley, Vauxhall, Jaguar/Land Rover and Leyland Trucks) are key to employment in the Northwest automotive sector, with their own direct headcount plus those of the adjacent integrators and local suppliers of indirect material and purchased services.

Very few of the component suppliers to the vehicle manufacturers/integrators are based in the Northwest or even in the UK since all the companies have corporate global purchasing policies in order to optimise material costs.

An example of a company which has evolved, based on historical reasons, is Futaba Tenneco, with Toyota (Derby) being its single customer. The company had a long history of sheet metal pressing and fabrication and won the contract to supply Toyota on commercial grounds when it was solely owned by the American company, Tenneco. The company had to form a joint venture with Futaba as part of a contract condition with Toyota. Other globally owned component suppliers, e.g. Pirelli, Nichirin & Hitachi, strategically decided that they needed a presence in the UK. Access to development grants was cited as one of the prime reasons for locating in the Northwest.

Four companies were set up as a result of the rationalisation of the Leyland Truck and Bus Companies during the 1980's and 1990's. The motorsport companies have been established as a result of local enthusiasts' entrepreneurial action, somewhat at odds with the vast majority of Motorsport companies which are based in the M40 corridor. The remaining companies are here, either due to their current owner's entrepreneurial activity, or have been established here for a long time.

Previous analysis of the Automotive Cluster in the Northwest identified the following nine sub-sectors, Table (1), at the core of the cluster. These sub-sectors are as categorised by the Society of Motor Manufacturers and Traders.

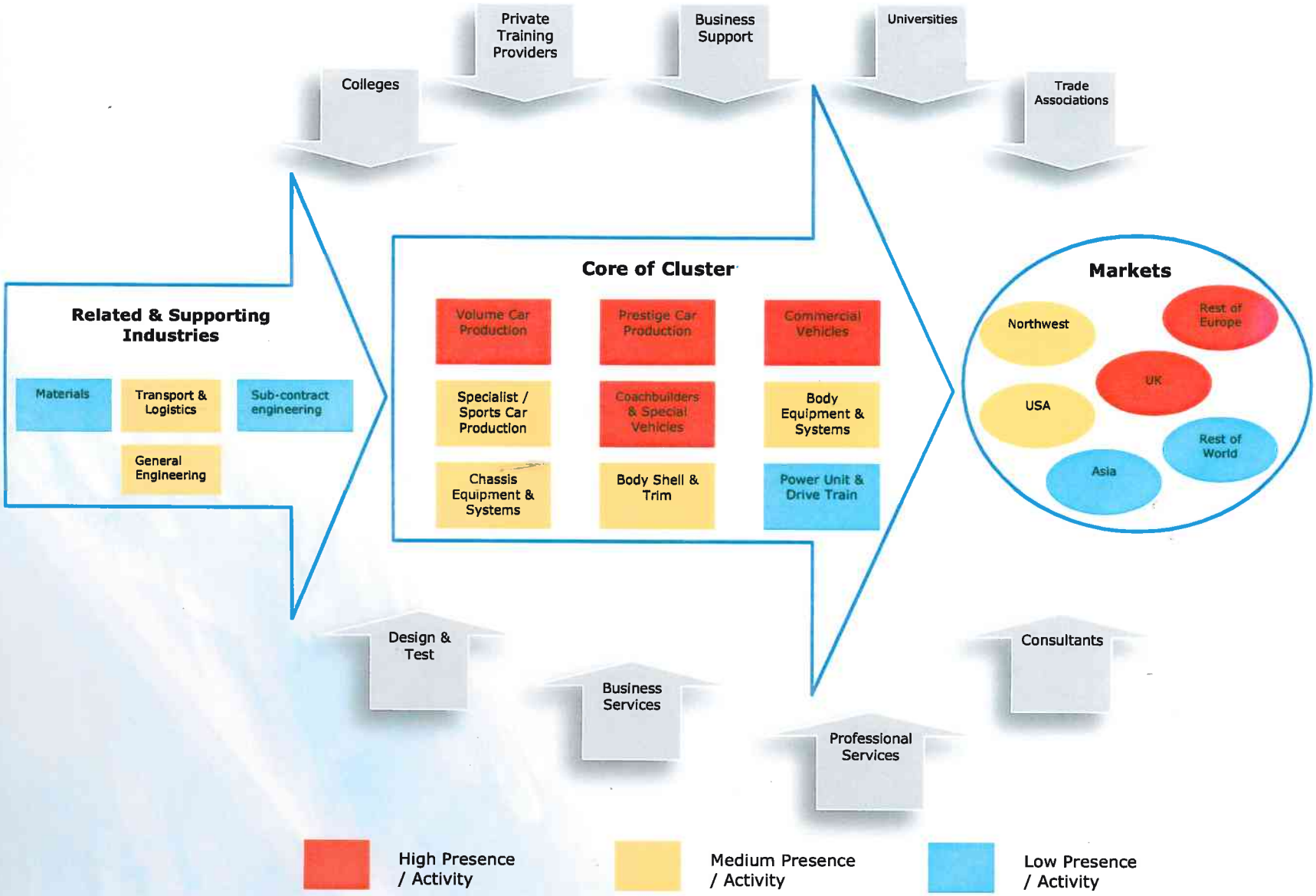
Table (1) Key Companies at the Core of the Cluster

Sub-sector	Major Companies	Comments
Volume Car Production	Vauxhall Motors (General Motors) Jaguar/Land Rover (Ford Motor Company)	Global brands with decision making not locally based. Jaguar/ Land Rover plant identified by Ford Motor company as their best plant globally. GM recently announced future investment for the replacement Astra model at the Vauxhall Motors plant
Prestige Car Production	Bentley Motors (Volkswagen Group)	Increased production from 1,000 to 10,000 units per year. Significant and important company in the VW Group
Specialist /Sports Car production	M-Sport Juno Racing Chevron Racing Tech 9	Seen as a strength in the region and with opportunities to develop
Commercial Vehicles	Leyland Trucks (PACCAR)	Identified as a high performing PACCAR plant globally. Output increasing year on year – currently 20,000 units per year. Building the new Daf truck which was voted truck of the year in 2006.
Coachbuilders and Special Vehicles	East Lancs Woodall Nicholson (Coleman Milne) Boalloy Industries TVAC Cartwrights	East Lancs and Coleman Milne have a long tradition of building buses and limousines respectively in the Northwest and are maintaining their market share. Cartwrights have a major share of the UK truck bodies and trailer market

Body Shell and Trim	Johnson Controls TDS Futaba Tenneco Decoma Merplas Visteon Mitras Automotive	Global 1st tier supplier companies located in the Northwest as a result of being suppliers to regional and UK based vehicle manufacturers.
Power Unit and Drive Train	Getrag Transmissions Torotrak	Getrag Transmissions voted best performing plant in Getrag group. Significant recent investment in the plant.
Chassis Equipment and Systems	Bosal Delphi Automotive Systems Pirelli Nichirin Hitachi Automotive Systems Piolax CHK Performance Springs TTI Group Scorpion Automotive Assembly Solutions	Global and Regionally owned companies
Body Equipment and Systems	Federal Mogul Presspart James Walker Dunlop Hiflex Presbar Diecastings Electron Technical Solutions	Global and Regionally owned companies

Figure (1) illustrates the structure and scope of the automotive cluster in the Northwest based on the industry classification.

Figure 1 – Northwest Automotive Cluster - Structure



2.2. Business Sectors

All of the companies visited as part of the study are directly linked to the automotive industry and fall into one of the above identified industry sub-sectors. From those companies visited and for the purposes of developing a strategy seven business sectors have been identified as follows:

- Sector 1: Volume vehicle manufacturers with production in excess of 100k units per annum. Total headcount - 4800
- Sector 1a: Local support companies for volume vehicle manufacturers. Total headcount - 1367
- Sector 2: Low/medium vehicle manufacturers with production in excess of 10k units per annum. Total headcount – 4860
- Sector 3: Tier 1/2 component suppliers, multi-national companies. Total headcount–4132
- Sector 4: UK owned lower volume Tier 1/2 component suppliers. Total headcount – 696
- Sector 5: Vehicle converters and bodybuilders. Total headcount – 1452
- Sector 6: Motorsport and accessories. Total headcount – 302
- Sector 7: Design/test companies. Total headcount – 162

This report will refer to these seven business sectors in presenting the findings and in developing the conclusions and recommendations.

Table (2) categorises the 40 companies visited into these business sectors and identifies headcount, ownership and responsibility for design, procurement, marketing and sales.

The only true cluster of automotive companies in the Northwest is in Sectors 1 & 1A where the integrators and sequencers support the Volume Vehicle Manufacturers from the supplier parks. In all the other sectors the companies act independently of each other in the Northwest Region.

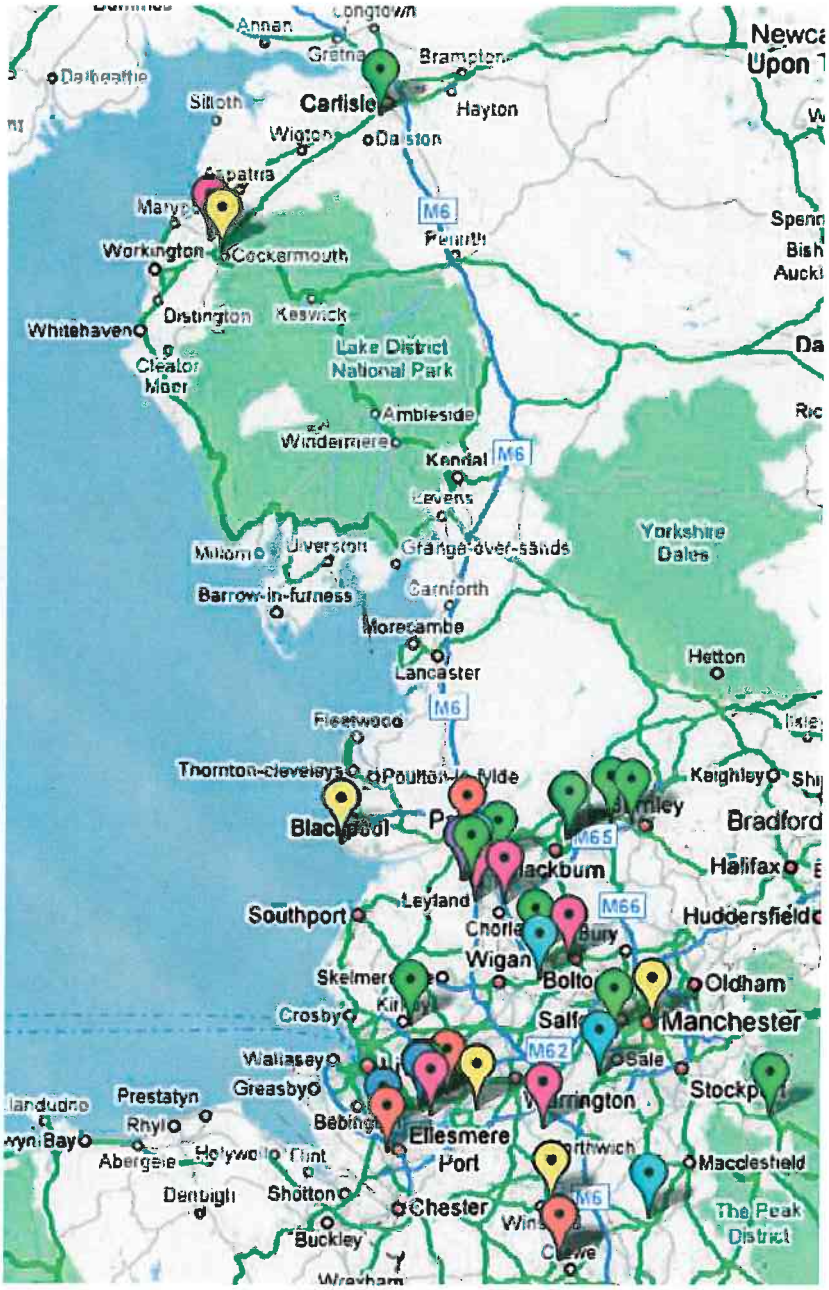
Table (2) Northwest Automotive Business Sectors

Sector	Profile	Company	Location	Employees	Ownership	Design Responsibility	Responsibility for Procurement	Responsibility for Marketing and Sales	Logistics
1	Volume vehicle manufacture(VVM)	Vauxhall Motors	Ellesmere Port	2200	Multi National	No	No	No	No
		Jaguar /Land Rover	Halewood	2600	Multi National	No	No	No	No
				4800					
1a	Volume Integrators	Visteon	Halewood	160	Multi National	No	No	No	No
		Johnson Controls	Halewood	288	Multi National	No	No	No	No
		TDS	Ellesmere Port	400	Multi National	No	No	No	No
		Decoma(Meriplas)	Halewood/Speke	519	Multi National	No	Joint	limited	Yes
				1367					
2	Low/Medium Vehicle manufacturer(L/MVM)	Bentley Motors	Crewe	3800	Multi National	Yes	Yes	Yes	Yes
		Leyland Trucks	Leyland	1060	Multi National	Yes	Yes	Yes	Yes
				4860					
3	Tier1/2 Volume Component suppliers	Delphi Electronics	Kirby	400	Multi National	Yes	No	No	No
		Federal Mogul	Chapel en le Frith	660	Multi National	Yes	Yes	No	Yes
		Getrag Ford	Halewood	730	Multi National	No	No	No	Yes
		Nichirin	Manchester	75	Multi National	No	Yes+ Group	Yes	Yes
		Pirelli Tyres	Carlisle	1000	Multi National	Some	No	No	Yes
		Hitachi Automotive	Bolton	125	Multi National	No	Yes	No	Yes
		Futaba Tenneco	Burnley	400	Multi National	No	Yes	No	Yes
		Bosal UK	Walton Summit	320	Multi National	Yes	Yes	Yes	yes
		Piolax	Accrington	76	Multi National	No	Limited	No	Yes
		Mitras	Winsford	195	Multi National	Part	Yes	Yes	Yes
		Dunlop Hiflex	Leyland	1					
		Presspart	Blackburn	150	Multi National	Part	Yes	Yes	Yes
				4132					
4	Lower volume Tier1/2 Component suppliers	CHK	Crewe	56	Regional	Yes	Yes	Yes	Yes
		Presbar Diecastings	Manchester	140	Regional	Tool	Yes	Yes	Yes
		Electronic TS	Runcorn	47	Regional	N/A	Yes	Yes	Yes
		James Walker & Co	Cockermouth	380	Regional	Yes	Yes	Yes	Yes
		Tti	Blackburn	33	Regional	N/A	Yes	Yes	Yes
		Performance Springs	Lytham	40	Regional				
				696					
5	Vehicle converters/ bodybuilders	Cartwright Group	Altringham	410	Regional	Yes	Yes	Yes	Yes
		Boalloy	Congleton	350	Regional	Yes	Yes	Yes	Yes
		East Lancs. Ltd	Blackburn	310	Regional	Yes	Yes	Yes	Yes
		Woodall Nicholson	Westhoughton	200	Regional	Yes	Yes	Yes	Yes
		LPD	Leyland	42	Regional	Yes	Yes	Yes	Yes
		TVAC Ltd	Leyland	140	Regional	Yes	Yes	Yes	Yes
				1452					
6	Racing/Rally cars + Accessory companies	Chevron (motorsport)	Knutsford	13	Regional	Yes	Yes	Yes	Yes
		M-Sport	Cockermouth	200	Regional	Yes	Yes	Yes	Yes
		Juno Racing	Leyland	7	Regional	Yes	Yes	Yes	Yes
		Scorpion Automotive	Chorley	45	Regional	Yes	Yes	Yes	Yes
		Assemby Solutions	Bolton	25	Regional	Yes	Yes	Yes	Yes
		Tech 9	Halton	12	Regional	Yes	Yes	Yes	Yes
				302					
7	Design/Test Companies	mi Technology Group	Leyland	100	Regional	Yes	Yes	Yes	Yes
		Torotrak (developments)	Leyland	62	Regional	Yes	Yes	Yes	Yes
				162					

Figure (2) Geographic Distribution of the Core of the Automotive Cluster

2.3. Geographic Distribution

The core of the automotive cluster is concentrated around the 4 key manufacturing sites for vehicle manufacture in the Northwest namely Merseyside with the Jaguar/Land Rover facility, Wirral with the Vauxhall Motors facility, West Lancashire with the Leyland Trucks facility and Cheshire with the Bentley Motors facility. This is illustrated in Figure (2) opposite which identifies the location of all of the companies who participated in the study.



Key:

Business Sector 1	Volume Vehicle Manufacturers	Vauxhall Motors. CH65 1AL Jaguar / Land Rover. L24 9BJ
Business Sector 1a	Volume Integrators	Visteon. L24 9PL Johnson Controls. L24 9PU TDS. CH65 1AT Decoma Merplas. L24 9PL
Business Sector 2	Low/Medium Vehicle Manufacturer	Bentley Motors. CW1 3PL Leyland Trucks. PR26 6LZ
Business Sector 3	Tier 1/2 Volume Component Suppliers	Delphi Electronics. L33 7XL Federal Mogul. SK23 0JP Getrag Ford. L24 9LE Nichirin. M32 0ZD Pirelli Tyres. CA2 6AR Hitachi Automotive. BL6 6JH Futaba Tenneco. BB12 6HJ Bosal UK. PR5 8AP Piolax. BB5 5YH Dunlop Hiflex PR25 3WL Presspart Manufacturing BB1 5RF
Business Sector 4	Lower Volume Tier 1/2 component suppliers	CHK. CW1 3PJ Mitras. CW7 3PZ Presbar Diecastings. M1 2WD Electron TS. WA7 1NU James Walker. CA13 0NH Performance Springs. FY8 3HE TTI Group. BB1 5RE
Business Sector 5	Vehicle Converters / bodybuilders	Cartwright Group WA14 5DH Boalloy. CW12 4QA East Lancs. BB1 5UD Woodall Nicholson. BL5 2EE TVAC. PR25 3GR
Business Sector 6	Racing / Rally Cars & Accessory companies	Chevron. CW9 6NL M-Sport. CA13 0PN Juno Racing. PR26 6TZ Tech 9. L24 5RB Scorpion Automotive. PR6 7BZ Assembly Solutions. BL1 4SF
Business Sector 7	Design / Test companies	Mi Technology Group. PR26 6TZ Torotrack. PR26 7UX Leyland Product Development. PR26 7TZ

2.4. Economic and Employment Data

According to the DTI statistics for SIC 34 (6) automotive manufacture in the UK is worth around £47bn to the UK economy, of which £31bn is identified with vehicle manufacture and £16bn with component manufacture. The Northwest accounts for in excess of £6bn of the total UK automotive manufacture economy which relates to 12% 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 services industries are included then this figure increases to circa £9bn.

Figure (3) shows the estimated change in turnover during the period 2002 to 2007 for the core of the cluster and the forecast change for the period 2002 to 2012. This shows an estimated overall increase in turnover during the period 2002 to 2007 of circa 38% mainly in business sector 2 due to the significant increased output at Bentley Motors.

Turnover is forecast to increase over the next 5 years by circa 25%, particularly in business sectors 1 and 2, with the already committed investment in the Vauxhall Motors facility and the potential for further investment at the Jaguar/Land Rover facility subject to future business decisions by the new owners.

Figure (3) Changes in Turnover

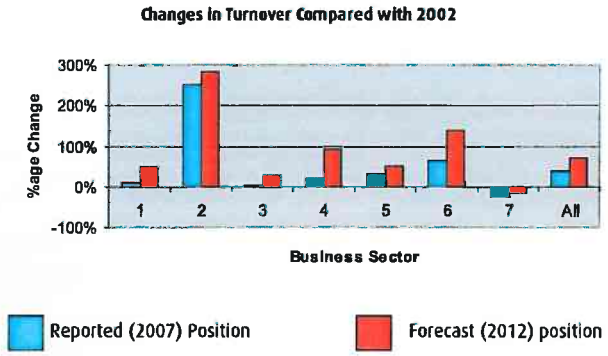
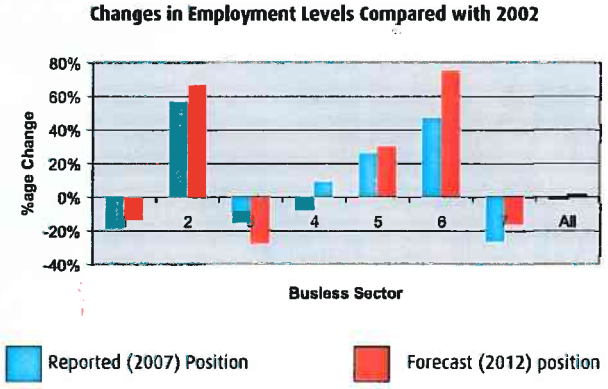


Figure (4) shows changes in employment levels to date compared with levels in 2002 and forecast for 2012 in each business sector. There has been a reduction of 18% in employment levels over the period in business sector 1 with little change forecast during the period to 2012. There has been significant increase in employment levels in business sector 2 during the previous 5 year period, due in the main to increased production at Bentley Motors, with levels being forecast to remain fairly static over the next 5 years. There has been high growth in the Motorsport sector with this trend forecast to continue. With the higher numbers of employees being employed in business sectors 1 and 2, it is forecast that there will be little change in overall levels of employment over the next 5 years as the major companies strive to improve productivity whilst maintaining the same level of employment.

Figure (4) Changes in employment levels



3. Company Strategies

3.1 Overview

Historical: 2002-2007:

Overall, the four vehicle manufacturers in the region are in a better state today than in 2002. There have been significant improvements in culture and in the flexible working of all employees, which has resulted in significant improvements in productivity. Production at Bentley Motors has increased six-fold during the period whilst only doubling the size of the workforce.

Leyland Trucks reached its maximum ever production rate during the period increasing output by 50% from 13,000 units per year in 2002 to a projected figure of 20,000 units in 2007, with an increase in the size of the workforce of less than 20%. During the period there has also been significant investment by PACCAR who have set up the UK centre for PACCAR Parts on site, serving the after market for DAF badged vehicles.

The Vauxhall Motors plant has recently been awarded the build contract for the replacement Astra model. There has been a 40% headcount reduction since 2002 partly due to the discontinuation of production of the Vectra and V6 engine. Since then the Astra body and car assembly have become the single product line working on a 2 shift operation.

To meet GM's efficiency requirements the size of the workforce will not increase with the introduction of the new Astra in 2009, although the plant will revert to 3 shifts to lift production capacity by 50%. Jaguar/Land Rover, Halewood successfully introduced the new Land Rover Freelander model in 2006 alongside the Jaguar X Type to return the plant to 100k units per year production levels. This new flexibility gives the opportunity for an additional model/volume to be introduced, subject to the future plans of the Ford Motor Company.

There has been the loss of three smaller vehicle manufacturing companies from the region during the period, with the closure of production at ERF, Seddon and TVR due to parent company/owner decisions. Also Garrett Turbochargers has closed in Skelmersdale, with manufacturing being moved to Romania by its parent company, Honeywell. Also Dunlop Hiflex has closed its operation in Leyland and transferred manufacturing to South Africa. Likewise in recent years Federal Mogul have closed production at their site on the Wirral. These decisions have been taken mainly on a cost basis and production moved to sister plants outside the UK regions, particularly Eastern Europe, where the labour costs are significantly lower than the UK.

Business sector 3 companies, subsidiaries of multi-national component supply companies, are typified by having customers who are global volume vehicle manufacturers and/or global tier 1 suppliers. These companies in this Sector have at least maintained sales revenue, but with reductions of some 30% in employment levels as the companies seek to attain the necessary productivity levels demanded by their customers and to match the sister companies of their multi-national owners, who are their main competitors.

Business sector 4 consists of regionally owned, smaller volume, component suppliers. The trend in this sector is for companies to reduce their dependency on the automotive markets, because of price pressures and to diversify into other markets, such as construction equipment, rail-track and medical equipment, where the emphasis is on lower volume, increased complexity, flexibility and responsiveness and where price is not the prime driver.

Business sector 5 is made up of those companies involved in vehicle conversion and bodybuilding. There is a relatively large representation of vehicle converters in the Northwest. They are regionally owned and have generally been in the region for a long time.

Their business is characterised by low volume, high design and high craft requirements and draws upon the traditional craft skills that have been developed in the region.

There is increasing competition from the import of "standard" models from the Continent but the low volume and high customisation requirements of this varied market should provide the opportunities for growth. The region plays host to two of the major UK bodybuilders, Cartwrights and Boalloy.

Cartwrights have maintained their significant share of the UK trailer and body market by keeping their customer base e.g. Royal Mail. They have developed innovative designs to stay ahead of their smaller competitors. Boalloy have been through the process of restructuring in order to maintain their market share.

They will also need to be able to comply with Whole Vehicle Type Approval for Trucks in the future. Data shows that these companies in business sector 5 are predicting growth in employment over the next 5 years.

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Business sector 6 is made up of racing car/rally car companies and automotive accessory innovators, who were started and owned by enthusiastic entrepreneurs. Although only a small employment sector, (302 employees in sample), this sector is predicting growth.

Business sector 7 consists of companies that were formed from the break-up in the 1980/90's of the former Leyland Truck and Bus Division. These companies have taken advantage from the high intellectual and facility investments that were made in the Truck and Bus Divisions prior to the break-up. There is a high level of engineering expertise residing in this sector.

Current: 2007

Each of the companies visited were asked to rate the importance of key strategies covering the areas of innovation, process improvements, skills, structural changes, marketing, change in sector/product mix, change in customers, change in suppliers and sourcing/procurement.

Figures (5a) to (5h) represents the feedback obtained from those companies in terms of how they rate the importance of these various strategies.

Figure (5) Summary of Relative Importance of Sector Strategies

Figure (5a) Average of all Business Sectors

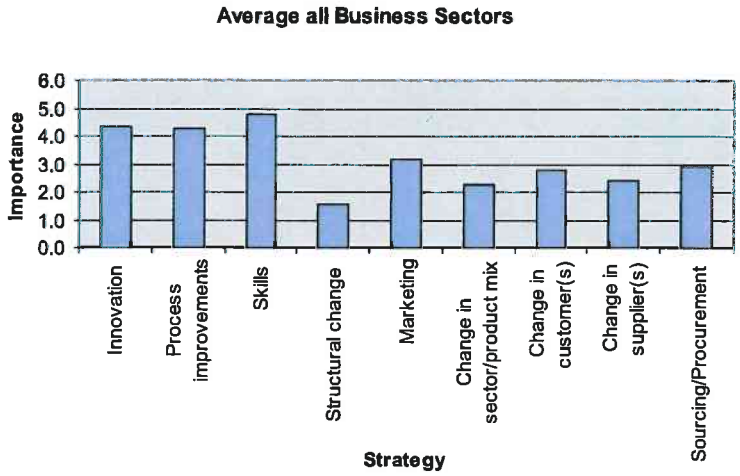


Figure (5b) Business Sector 1- Volume Vehicle Manufacturers and Sequencers/Integrators

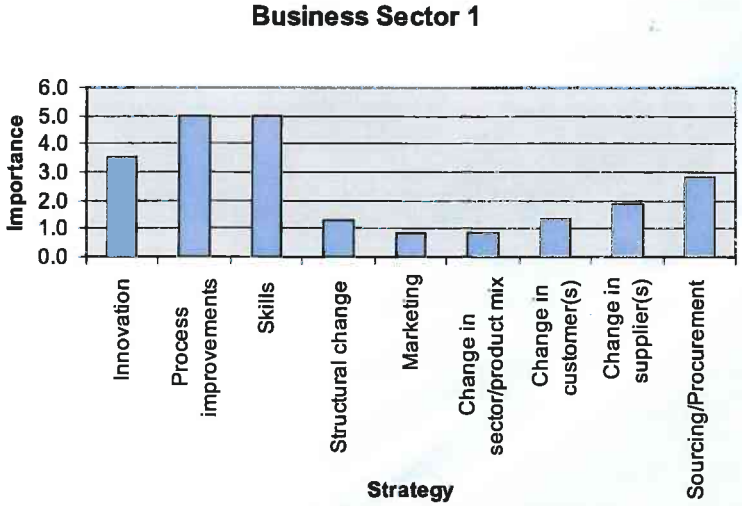


Figure (5c) Business Sector 2 – Low/Medium Vehicle Manufacturers

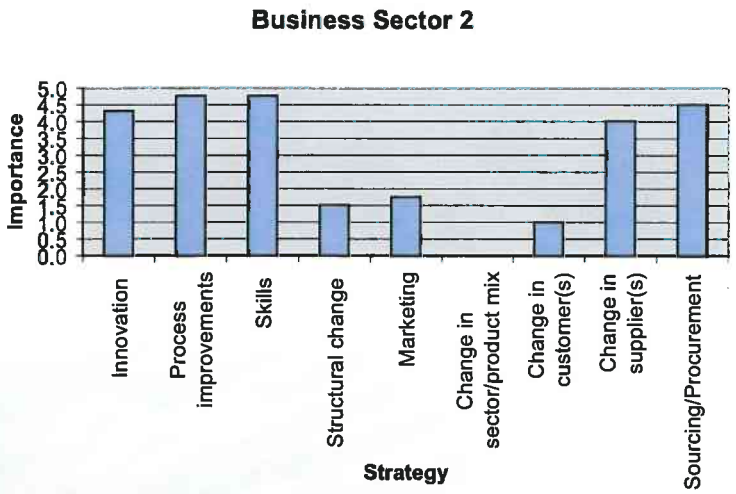


Figure (5d) Business Sector 3 – Tier 1/2 Volume Component Suppliers

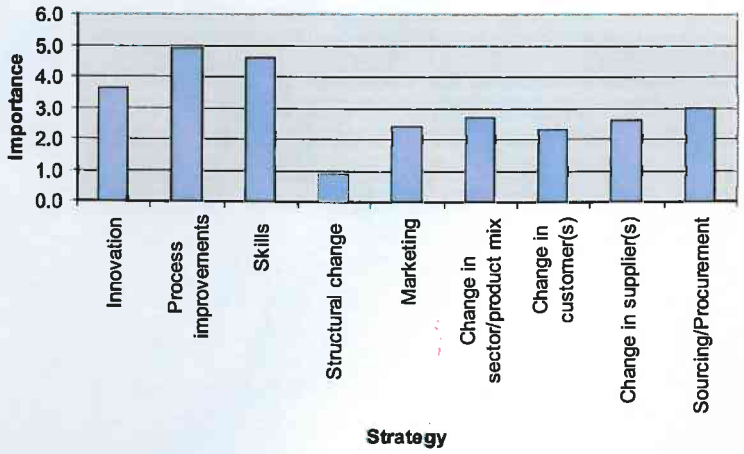


Figure (5e) Business Sector 4 – Low Volume Tier 1/2 Component Suppliers

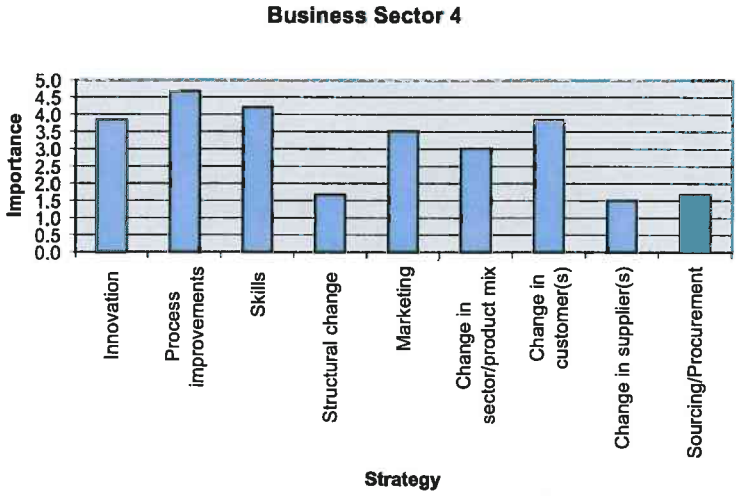


Figure (5f) Business Sector 5 – Vehicle Converters/Bodybuilders

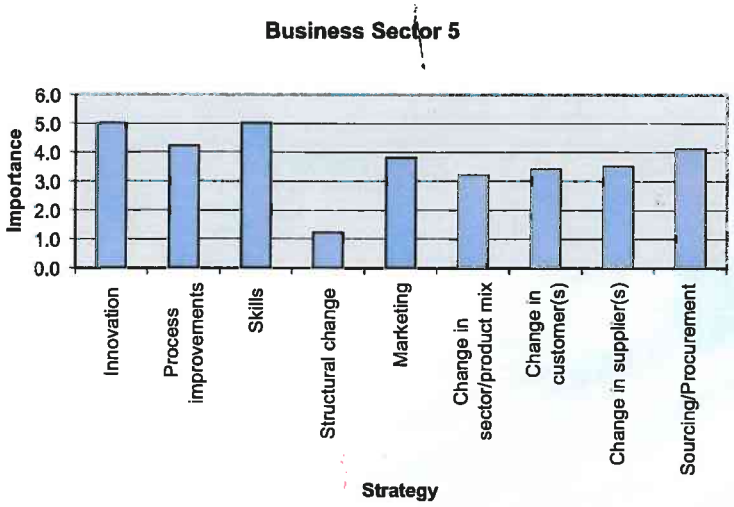


Figure (5g) Business Sector 6 - Motorsport

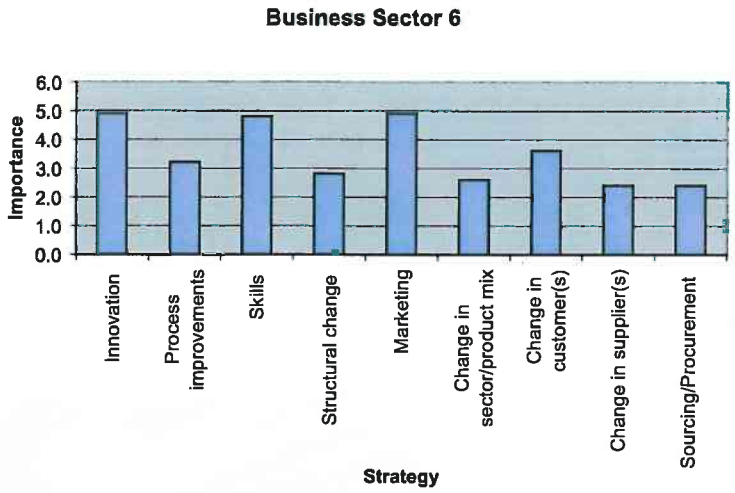
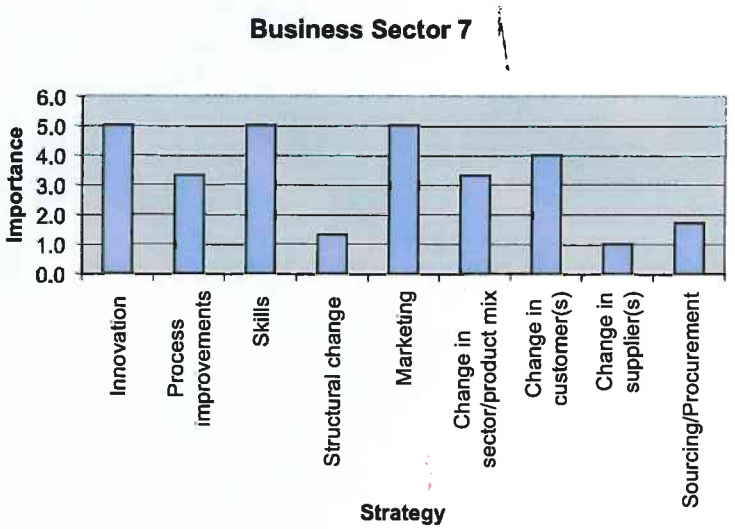


Figure (5h) Business Sector 7 – Design and Test



The feedback shows, not surprisingly, that all business sectors rate Innovation, Process Improvements and Skills as their 3 key priorities, apart from process improvements in the Motorsport and Design and Test sectors which is not rated for obvious reasons. The Motorsport business sector rated marketing as an important part of their strategy, along with innovation and skills. Marketing was not rated important by the companies in business sector 1 since they do not have local responsibility for this area of activity. Companies in business sector 5, vehicle converters and bodybuilders, rate procurement and supply chain strategy as important for their future well being.

Forecast: 2007-2012

For the future, most of the companies have the objective of increasing business by significantly improving productivity to maintain competitiveness, but do not expect to increase employment levels.

The Northwest companies can never compete on labour cost with the new manufacturing markets in Eastern Europe. Hence, whilst all are planning to be more productive, a major concentration of their efforts will be on customer added value in terms of service, delivery, quality and specification, particularly for their UK customers.

In business sector 3 (Tier 1 & 2 component manufacturers), the companies expect that their employment levels will need to reduce in order to meet their company headquarters' cost base expectations, with the threat of relocation, as happened with Garrett Turbochargers.

The vehicle manufacturers all recognise that there will be continuing global pressure and that there is always the risk of changed circumstances at their corporate headquarters in USA & Germany.

The Motorsport sector is particularly optimistic about the future potential growth as they support the "rich" leisure market and are seeking a higher promotion of their activities in the NW region.

3.2 Procurement

There is continuous pressure on companies in all of the business sectors to control and reduce their material costs. Table (2) shows that material procurement is not undertaken at the Northwest sites of companies in business sectors 1 and 1a and some key companies in business sector 3.

Increasingly the sourcing of materials comes from mainland Europe with no Northwest suppliers identified.

The vehicle manufacturers seek to reduce the costs of their final assembly by using "integrators" to sequence the supply of major sub-assemblies in line-side "just-in-time" stillages, to minimise handling and packaging. The vehicle manufacturers look for the highest quality levels (e.g. Ford Q1 and TS16949) from their suppliers and measure the quality by defect parts per million (ppm). With the growing number of in-bound truck deliveries, vehicle manufacturers are seeking improvements to the transport infrastructure. There is a need to recognise that the supply base of the multinational companies for their core components is starting to move east to China, India etc. The Northwest will need good port facilities and distribution to supplier parks for local subassemblies and line sequencing to be able to exploit this changing supply chain. This is an important area where the vehicle manufacturers are stating that they need more support from the regional government agencies.

Companies in all other business sectors have local responsibility for procurement. The integration of sub-components and materials is undertaken within the plants by company employees. Suppliers are mainly European, including the UK, although, there has been a general reduction in the number and capabilities of the UK supply base as the UK is becoming too expensive for basic materials/components, therefore reducing local Northwest content.

Those companies in business sector 2 who have a build to order strategy often require quicker response times from their suppliers. This would appear to favour local suppliers but, with there now being a very efficient European distribution system, there is no limitation to low cost European sourcing. Quality and delivery performance are measured on an ongoing basis and strong SQM (Supplier Quality Monitoring) action taken to resolve problems, notably by companies in business sectors 1 to 3.

The smaller companies in business sectors 4-6, who generally use UK suppliers, identified that they regularly encountered problems on delivery, quality and price increases, some of which were often imposed. Their lower volume base gives them limited purchasing leverage with their suppliers. They seek to cope by trying to improve communications and also by holding extra stock of critical materials.

There is little in the way of material supplies between Northwest companies due in the main to cost pressures, although companies in these business sectors would like to see more UK/local suppliers for small parts and services.

3.3 Marketing and Sales

With the exception of Bentley Motors, the vehicle manufacturers (including Leyland Trucks whose products are sold by DAF) and the majority of the global tier 1/2 suppliers, do not have responsibility for marketing and sales nor do they have any customer interface. The plants are given their customer build programmes from their corporate head quarters, with their process and logistic plans intended to:

- Achieve 100% delivery schedule
- Achieve minimal defects, measured by audit and p.p.m. defects
- Quickly respond to any delivery, defects or warranty problems
- Minimise operating costs

Plant visits are used as a "selling aid" to key UK and mainland European customers including an off-road track at the Jaguar/Land Rover plant. Over 50% of production from the vehicle manufacturers is exported, with the dollar exchange rate being an issue, particularly at the Jaguar/Land Rover plant.

Bentley does have sales and marketing responsibility and distributes all of their cars to privately owned dealers. Their current product range (especially the Continental) is very successful with a 6 to 9 month order lead time. The plant is currently operating at full capacity, producing 10,000 units per annum. North America accounts for 50% of sales and customer/dealer ratings are very high. The company is in the process of opening up sales channels to Russia and China.

All companies in business sectors 4 to 7 have sales responsibility for their customers. This is usually the joint responsibility of the managing director (or owner) and the sales manager. The study has identified that the majority of companies are under continuous pressure from automotive customers notably for reduced prices, with quality and delivery taken for granted.

Some of the companies which currently have 100% automotive customers are looking to widen their customer base to support other industry sectors e.g. commercial, rail track and medical which are not seen to be as price competitive. Some are also adopting a strategy of faster response and delivery times to enquiries by holding stock and have gained business from other suppliers with longer lead times.

Certain smaller companies expressed a desire to obtain more business in the Northwest. It was felt that this could be achieved through better promotion of the Northwest automotive industry capabilities in all business sectors and in particular in the motor sport sector. There is an SMMT service to link suppliers to potential customers on a UK/EU basis but consideration could be given to a more specific regional promotional service.

3.4 Trade and Investment

The two vehicle manufacturers in business sector 1 are at different stages in their business cycles. The GM Vauxhall Motors plant at Ellesmere Port has recently been awarded build plant status for the replacement Astra model which will be launched in 2009/2010. This will increase volume at the plant to some 180k units per annum. They are currently developing their plans for integrators and sequencers and it has been announced that Johnson Controls have been awarded the contract to build the seats for the new model. Their local sequencer, TDS, is negotiating a revised contract, ideally, to be located within the plant.

Jaguar/Land Rover introduced the Freelander 2 in 2006, alongside the Jaguar X type to attain a 2 shift production schedule of 100k units per annum across both models. To fully utilise the plants capacity (up to 200k units per annum on 3 shifts) would need the introduction of a third model. The current uncertainty regarding future ownership of the Jaguar/Land Rover brand has meant that any investment decisions are on hold.

Both vehicle manufacturers have identified that they would like the Northwest government agencies, led by the NWDA, to be pro-active in helping them secure the future of both plants, with common needs identified. They would particularly like help with site rationalisation for:

- new/improved sequencing centres
- in-bound and out-bound inter-modal rail heads
- business park development including lorry parks, internal conveyors, and more suppliers on their parks to improve logistics

Both vehicle manufacturers in business sector 2 have had strong growth in the past 5 years with significant investment from their parent companies. Both companies are profitable and are starting new product development programmes. They both consider that assistance is required from the government agencies with land usage and planning applications and generally for those agencies to become more "industry friendly". The development of rail heads has been considered but little progress has been made with the local authorities.

In addition, initial supply chain studies have identified an opportunity to adopt some of the practices of the large vehicle manufacturers in business sector 2 (i.e. Bentley Motors & Leyland Trucks) by attracting integrators and maybe a sequencing company close to their plants. This would potentially allow transport of smaller components from Tier 1/2 suppliers, with local labour used to complete the full sub-assemblies needed for line fit and sequencing. There is thus the potential for more local economic activity and employment, but the business case has still to be made at the lower factory volumes of 10-20k units p.a.

The region's vehicle manufacturers have had many contacts with government agencies seeking support and assistance. This report cannot decide on the business case for the needs identified by the vehicle manufacturers. However, they do state that the government agencies in other European countries (e.g. Germany & Spain) are more supportive of their local sister plants and are more pro-active with their support. It is suggested that the NWDA/NAA needs to work more closely with the vehicle manufacturers in the region so that they are given the best possible support to ensure that they continue to be based and thrive in the region. The companies all consider that, historically, there has been a tendency to only react to problems when a critical stage is reached e.g. threatened closure or redundancy, whereas a more proactive approach should be sought to ensure the companies are best prepared for the future challenges.

The investment decisions for companies in business sector 3 are made outside of the region. Their main competition is often from sister plants in mainland Europe with many of the Northwest plants being considered by their owners to be "high-cost" plants. In order to justify any future investment these companies have to have plans in place to significantly improve their efficiency. An example is the Getrag Transmission plant where an investment has been approved to double the volume with no increase in headcount. Delphi and Federal Mogul have had to reduce their headcount by 35% and still maintain their current volumes.

If the NW automotive industry is to maintain its employment levels it will therefore need to attract new businesses into the region. More efforts will need to be made to promote the region to potential new entrants. Recognising the strength of the current vehicle manufacturers, promotion of the region to OEM's from non European countries such as India & China, who are looking to set up European final vehicle assembly factories could be an opportunity. This will require a specific promotional programme for the region including attendance at International Trade Fairs.

The Motorsport sector has identified significant growth potential albeit from a small base. There may be the opportunity to develop this as a specific Northwest automotive sub-cluster, with specific infrastructure and technical investments which could assist in higher visibility promotion of the Northwest automotive industry. However this will require further investigation.

In business sectors 4 to 7, which are regionally owned, many by local entrepreneurs, there is the basic need to maintain profitability and positive cash flows in order to survive. In order to achieve this they are looking to continuously improve their efficiency.

The smaller companies generally seek to adopt a strategy of high levels of customer service and quality so as not to compete with the major multi-nationals and seek to add more added value, specialisation and technical innovations for their customer base, which is mainly within the UK.

The survey has identified that certain of the companies surveyed had received some assistance from government agencies but their view was that the availability of business mentoring is generally inadequate. Mentoring support for the smaller companies particularly in sectors 4-7 will become more important as competitive requirements continue to increase. The use of mentors from the larger multinational companies, as has already started with Getrag, will potentially develop this sub-cluster of the NW automotive companies.

3.5 Standards and Accreditation

The large majority of the companies surveyed have accreditation to ISO/TS16949, (accounting for 80% of companies visited) and many are using the process to help drive efficiency improvements in their companies. The companies also have many common KPI's which they use to monitor theirs' and their suppliers performance based on quality, cost and delivery measures, with key indicators being:-

- Delivery quality level measured in ppm
- Delivery schedule adherence to customers
- Overall equipment effectiveness
- People productivity/value-added per person
- Stock turns
- Floor space utilisation

The results of internal benchmarking by the Multinational companies are critical in their global sourcing decisions for products and facilities. Recent studies have identified that Jaguar/Land Rover and Leyland Trucks achieved top factory ratings within their respective Groups.

4. Research and Development

Except for the volume manufacturers and their sequencers/integrators in business sector 1 most of the Northwest companies have R & D responsibility which is key to their future.

In business sector 1 all of the companies' design and development activity is undertaken at their head quarter operations. The local plants are responsible for productionising the new designs and strong input from the manufacturing engineers at the plant is necessary.

The companies in business sector 2 have design responsibility for their new products employing in total some 900 engineers. Both companies stated that they had difficulty in recruiting engineers notably to the Northwest.

They have developed links with universities for technical innovation but not particularly with Northwest universities.

In order to attain future competitiveness both are seeking to adopt/develop new materials suited to medium volume manufacture.

The tier 1/2 suppliers in business sectors 3 and 4 all have design responsibility with the notable exception of Getrag. A combined headcount of approx 300 engineers are employed by the surveyed companies.

In business sectors 4 to 7, the availability of competent design and manufacturing engineers is critical to their future survival since they need to generate new and improved products for their customers and potential new customers. The recruitment and retention of engineers in the Northwest is a challenge to many of the companies.

The availability of practical engineers is the key to the future of companies in business sector 5 since many of their customers require unique conversions and/or bodywork. Practical engineers are required to translate the customer requirements into cost effective designs that can be manufactured locally and at a competitive cost. Their engineers have often been employed at the company for a long time and consequently have a good deal of experience with their product group.

Torotrak and Xtrac Variator in the KERS - CAD design

Access to skilled and practical engineers is a key element to the future expansion and success of companies in the Motorsport business sector 6. All of the companies in this sector are finding difficulty in recruiting graduates who have the knowledge and practical skills, although UCLAN was cited as a new source for graduates in this business sector.

Chevron has outsourced the design of their new road car to South Africa. Business sector 7 companies have a large requirement for qualified engineers as design and testing is their business focus. To date, they have taken advantage of the availability of skilled and experienced personnel released from the break-up of the Truck and Bus Division but this is an ageing resource that will have to be replaced.

The study has revealed no strong on going linkages with the Northwest universities, but occasional "one off" short term technical projects. The vehicle manufacturers and their support companies have expressed disappointment that the local universities did not pro-actively seek to work with them, particularly on manufacturing and logistics projects.

5. Skills

The assembly processes at the vehicle manufacturers and the majority of the tier 1 and tier 2 suppliers (business sectors 1 to 4) do not require skilled (craft) engineers. The majority of the assembly/process workers have been trained to NVQ 2/3 level and there were no identified problems with recruitment in this area. A readily trained source of assembly/process workers is an important factor when companies are considering the expansion of their business, the development of larger supplier parks and also for potential new entrants to the automotive industry in the Northwest.

Training is a key element of all company activities and is seen as essential to support efficiency gains and quality improvements, often seeking to implement the principles of lean manufacturing. Many companies cited that more help was needed in the area of culture change/employee engagement and empowerment.

The contraction of the UK manufacturing sector and related apprentice training has resulted in a shortage of certain skill sets, in particular:

- Welders, fabricators and spring coilers
- Tooling engineers
- Manufacturing, quality and maintenance engineers
- Design and software engineers

Companies visited are finding such people difficult to recruit and have resorted to internal training of existing employees, with some companies restarting their apprenticeship programmes. Bentley Motors, Jaguar/Land Rover and Getrag have accredited training and coaching programmes with the opportunity for other Northwest companies to participate. Companies in business sectors 5 to 7 are primarily engineering led companies and have a need for skilled and practical employees for their manufacturing activities.

Recruitment was identified as a common challenge with internal training and development being commonly adopted to address this problem. Another route being taken to overcome this problem of the recruitment of skilled people was to employ Polish workers.

6. SWOT Analysis

Strengths

- Cluster contributes £9bn to the Northwest economy
- 4 successful and growing global vehicle manu facturers (VMs) located in the region
- Availability of trained semis-killed 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

Weaknesses

- Ability of the multi-nationally owned major companies to control their own destiny (business sectors1-3)
- 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 North west automotive companies and the Northwest universities

Opportunities

- 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 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 specialist vehicle and motor-sport sub-cluster

Threats

- 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/Land Rover

7. Conclusions

1. The majority of the automotive companies in the Northwest work independently of each other and do not operate in a cluster as defined by Porter. The exception is the regions' two volume vehicle manufacturers and their local integrators and sequencer companies.

2. The vehicle manufacturers and their related support companies are the prime sectors for employment and economic activity. Following significant investments of over £2bn in products, facilities and people in the last 5 years, the companies are in a better state today than in 2002. These sectors need to be given priority for support and action for the Northwest automotive industry to retain their presence and continue to prosper.

3. Based on the vehicle manufacturers' plans there will be more potential for local outsourcing of sub-assembly and in-line sequencing activities providing for the further development of local supplier parks and the support companies.

4. If the Northwest automotive industry is to maintain its employment levels it will need to attract new businesses into the region. One significant area of opportunity is to increase the activity on supplier parks with all the vehicle manufacturers providing more employment for local sub-assembly work. In addition greater efforts will need to be made to promote the region to potential new entrant OEM's from non European countries such as India & China. This will require a specific promotional programme for the region including attendance at Trade Fairs.

5. There are no identified shortages for semi-skilled assembly/production workers within the automotive companies but a need to develop more practical technical engineers and skilled craft employees.

6. The global drivers on cost competitiveness require all companies to reduce material and labour costs. Companies are having to embrace a culture of continuous improvement and change. Significant improvements have been made particularly in business sectors 1 and 2 companies and this will need to be cascaded into all business sectors if the Northwest automotive industry is to be competitive.

7. The multi-nationally owned tier 1/2 suppliers in business sector 3, which are located in the region for historical reasons, are under the most threat for the future. They are competing with sister plants across Europe, having to reduce headcount, seeking to match their operating costs. Whilst it is important for the Northwest to support and retain these companies it is likely that there will be some major reorganisations or closures in the next 5 years, as has recently happened with Garret Turbochargers and Eaton Transmissions closing and moving to Eastern Europe.

8. The smaller companies in business sectors 4 to 7, who are in the main locally owned and can determine their own strategy, have taken actions and will continue to do so in order to mitigate against market pressures. They are seeking to diversify into other markets and products where the requirements are for lower volumes, higher value added products where the logistics are more complex and cost is not the key driver. These companies are becoming less dependent on the automotive industry and are becoming part of the general manufacturing industry (cluster) in the Northwest.

9. There is a lack of knowledge regarding the capabilities of the Northwest automotive industries and there is a need to better promote these capabilities both within and outside of the region.

10. There is a perceived lack of a proactive response from the public sector organizations to the industry needs. There is confusion amongst the industry regarding what support is available and from whom.

11. Except for the volume manufacturers and their sequencers/integrators in business sector 1 most of the Northwest companies have R & D responsibility which is key to their future.

12. There is little evidence of ongoing collaborations with the Northwest universities.

8. Recommendations

Recommendation 1:
The vehicle manufacturers (business sectors 1 & 2) are the prime sectors for employment and economic activity in the Northwest automotive industry. To sustain their healthy presence in the region priority must be given to adopting a more pro-active approach to support the companies' business plans.

It is recommended that a detailed study should be undertaken of the infrastructure needs of the Northwest automotive industry for the future to take account of the changing Supply Chain parameters of the multinational companies. This will need to recognise the growing need for inter-modal transport and logistic facilities. This study should 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
- Planning approvals for expansion and facility relocations including further development of supplier parks

Recommendation 2:
There is a shortage of technically competent engineers with all companies finding recruitment difficult. To sustain the Industry a stream of new engineers is needed. Whilst external recruitment will continue it is recommended that programmes for training graduate, technical and craft engineers is reviewed to ensure that the content and financial support is optimised.

Recommendation 3:
It is considered that all companies need to have active "Culture Change" programmes. These have been ongoing for some time in the vehicle manufacturers and it is recommended that a plan to cascade the programmes into all NW auto companies should be developed.

Recommendation 4:
Current business mentoring is in most instances inadequate. It is recommended that a more effective mentoring support scheme is developed and implemented. In particular this is required in the smaller business sectors 4-7, with potentially some of the trained mentors coming from the larger companies in business sectors 1-3.

Recommendation 5:
To promote the region's automotive capabilities to generate more trade within the region and export opportunities outside of the region it is recommended that a Marketing Plan is developed and implemented.

Recommendation 6:
If the Northwest automotive industry is to maintain its headcount it will need to attract new businesses into the region. It is recommended that plans are developed to promote the region to potential new entrant OEM's from non European countries such as India & China. This will require a specific promotional programme for the region including attendance of Trade Fairs .

Recommendation 7:
Many of the companies surveyed were not aware of the potential range of business support activities available to them. There needs to be much better awareness of public sector support to industry and it is recommended that a clear listing of all the agencies programmes is prepared for use by the companies in the Northwest automotive industry.

Recommendation 8:
As there is little evidence of on-going collaboration between Northwest automotive companies and the region's universities it is recommended that a study is undertaken to identify regional company needs for academic/expertise input to their product and process innovation requirements. The study also needs to identify the Northwest universities' capabilities to meet these needs so that areas of mutual benefit can be developed on a long term basis.

9. References

(1) Michael Porter, 1998

(2) The Automotive Innovation Growth Team Report, May 2002

(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) DTI Autoindustry SIC (34) data, September 2006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