CUMBRIA ECONOMIC STRATEGY 2008 – 2028

SPECIALIST MANUFACTURING

STRATEGY ACTION PLAN NO. 2

Purpose

The purpose of this Strategy Action Plan is to bridge the gap between the strategy as outlined in the Economic Plan and the delivery of the actions which will be outlined in the next Sub-regional Action Plan (due for release in December 2008). Each document accordingly takes a long term view when seeking to provide clarity and strategic prioritisation to an otherwise 'wish-list' of projects and programmes.

It should be noted that these Strategy Action Plans are progressive documents which look up to 20 years ahead; but which nonetheless focus on providing, where possible and evidenced, hard targets and economic impact over the next 10 years. The Strategy Action Plans thus begin to describe a future Cumbria and show, through aspiration, what the spatial impact of the Economic Plan could be across the 4 distinct delivery areas in the county; Barrow, Carlisle, West Coast, South Lakes & Eden.

Whilst these Strategy Action Plans acknowledge existing Cumbrian strategies, they try to reflect the impacts of an aspirational level of future economic growth. Each document is therefore deliberately challenging and ambitious, yet remains non-prescriptive in nature.

The plans attempt to identify the impacts and inter-relation between other closely linked priority industry sectors and assess the cumulative effects on cross-cutting themes highlighting, for example, how the spatial patterns of growth may necessitate the provision of appropriate housing, connectivity, employment land etc., and thereby examining whether current strategies could meet requirements in terms of employment, skills, infrastructure and the like, if we were to grow in accordance with our aspirations.

A significant amount of debate has already taken place to get to this point and we now open up the floor for full public discussion of the themes and actions highlighted by each Strategy Action Plan.

Whilst all comments are welcome, we would appreciate, in particular, comments which will aid in the prioritisation of the key actions. For example: What do you think would or would not work? Where should we be focusing most of our attention? What key actions would achieve the greatest results or which would bring little benefit?

Vision

"A strong, stable manufacturing base that capitalises on the traditional engineering strengths of Cumbria and also occupies a leading position in high-technology, knowledge-based industries. Businesses in the sector are high-productivity and have the right skills, the right premises, and the right access to markets to deliver sustainable GVA growth, and also have the vision to anticipate and respond to economic change."

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1. EXECUTIVE SUMMARY

THE VISION – Where we are going

"A strong, stable manufacturing base that capitalises on the traditional engineering strengths of Cumbria and also occupies a leading position in high-technology, knowledge-based industries. Businesses in the sector are high-productivity and have the right skills, the right premises, and the right access to markets to deliver sustainable GVA growth, and also have the vision to anticipate and respond to economic change."

THE CURRENT SITUATION

Across the County: Manufacturing comprises 17% of the Cumbrian workforce, compared to only 11% nationally, and delivers an estimated £0.95 billion GVA (not including nuclear-associated manufacturing) per annum to the economy. Overall productivity is on a par with the UK average but is far higher in certain industries (Nuclear, Defence), which indicates lower productivity in other areas. The sector faces some critical issues, with an inadequate supply of accessible, modern land and premises, poor connectivity in the west of the county and an inadequate skills base in the workforce.

Barrow: Highly reliant upon the manufacturing sector, with a high-technology cluster of advanced engineering, and defence nuclear around BAe Systems combined with a wide range of other industries including paper manufacturing, chemicals and sub sea technology. Total employment is around 6,000. Issues include reliance on a single employer (BAe), connectivity and quality of land and premises.

West Cumbria: Manufacturing associated with the nuclear sector is crucial to Copeland, with 34% employment in the sector. In the more rural parts of Allerdale this importance diminishes slightly but the sector still has a strong base, including Innovia Films (plastics) James Walker (sealing technology) and M-Sport (advanced automotive). There are approximately 16,000 employees in the sector with crucial issues including distance / connectivity to markets.

Carlisle: Manufacturing is primarily in food processing (covered in Strategy Action Plan 4: Food and Drink) but with strong components of rubber and plastics (e.g. Pirelli Tyres) and engineering, both basic and advanced. Total employment excluding food is around 4,000, connectivity is excellent but availability of affordable land and highly-skilled workforce are barriers to growth.

Eden & South Lakeland: Have surprising manufacturing diversity considering their rural nature, with the solid state lighting cluster in Ulverston, specialist fibre products and turbine engineering in Kendal, giftware production in Penrith and mineral processing in the Eden Valley. Employment over the two districts equals around 7,500. A fundamental issue is the availability of suitable land and premises for development.

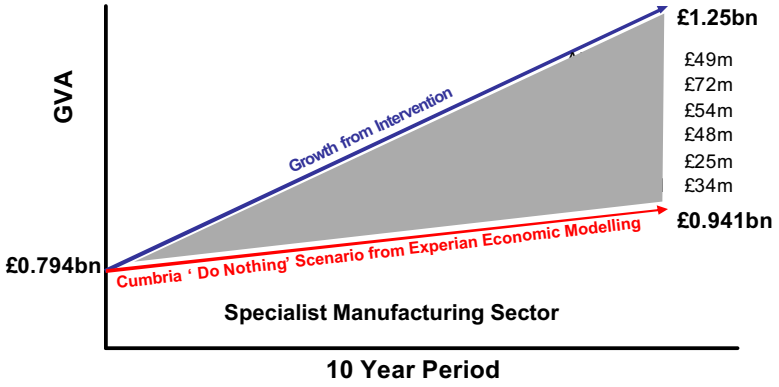
SUMMARY OF KEY ACTIONS

1. **Deliver High Impact Productivity Programme:** Lean process training targeted at small-medium enterprises, rural and lower added-value businesses.
2. **Provide a Ready Supply of Appropriate Land and Premises**, suitable for the needs of modern manufacturing, across all areas of the county.
3. **Increase Knowledge Transfer, Innovation, Research and Development** and increase the levels of HE/FE business interaction, through Knowledge Transfer Partnerships, specialist support to enhance uptake of R&D finance and targeting of small and medium enterprises.
4. **Instigate a Programme of Economic Monitoring and Evaluation** to identify potential changes in the world market situation, for example import / export balances, re-manufacturing potential, changes in niche markets and links to wider markets and international trade.
5. **Expand the Manufacturing Base in Sectors Delivering Growth and High GVA –** Marine / sub-sea, defence, photonics, advanced materials and advanced engineering, through specialist investment and support to tier 1 companies and initiatives to assist tier 2 and 3 companies to participate in supply chains.

6. **Deliver a Programme of Supply Chain Development** across all manufacturing sectors, developing supply chains both inside and outside the county.
7. **Business Marketing Plan** to brand Cumbrian manufacturing as 'open for business'.
8. **Engage Manufacturing Employers through the Cumbria Employment and Skills Board,** to identify and meet current and projected skills gaps, with the goal of evolving 'work-ready' skills provision across the county.
9. **Up-skill the Workforce at all Levels** with industry ready skills, to provide a ready labour supply – e.g. ESOL / Skills for Life, specialist diplomas, apprenticeships, work-based learning (Train to Gain etc.), foundation degrees and higher qualifications – See Strategy Action Plan 7: Employment, Education and Skills for details.
10. **Provide Accessible and Practical Capital Assistance and Inward Investment Grants**, focused on results rather than targets, to all potential growth sectors (not just currently defined ones).

INDICATIVE OUTPUTS

1. Growth in Manufacturing GVA to £1.25bn.
2. Consistent 6% growth per annum in FTE employment.
3. Industry workforce qualifications to 90% Level 2, 60% Level 3 and 35% Level 4.
4. Manufacturing productivity increased to above UK averages in all sectors.
5. 50% + of SME's engaged in demonstrable Research, Development or Innovation.



Data does not always total correctly due to rounding up.

THE GOALS – What Cumbria will look like in 10-20 years time

A world-class position in advanced and technology based manufacturing, capitalising on existing industry clusters including the defence / marine industry and the nuclear / energy sector. A strong, sustainable and forward-looking business base, with the capacity to respond successfully to market change and global economic forces.

High productivity manufacturing best practise in operation across the sector in Cumbria, with p**roductivity levels in <u>all manufacturing sectors</u> exceeding the UK average** and matching the levels in key competitor countries such as the US and Germany. This high productivity will bring consistent growth in Gross Value Added.

A **manufacturing workforce with the right skills** at all levels to ensure success in indigenous business and provide a draw to external investment.

Increased levels of high value-added jobs, particularly in Furness, the West Coast and rural areas. Target- employment growth of 6% year on year.

Enhanced levels of research and development, product and process innovation that utilise the existing higher and further education resources in the county and generate returns for businesses. By 2018 Cumbrian manufacturing companies will spend 50% more on research and development per annum and the proportion of small and medium enterprises engaging in formal innovation and R&D will rise to 50%.

This strategy is linked to and therefore must be understood in conjunction with: Energy and Environmental Technology, Food & Drink, Education & Skills, Enterprise & Business, Rural & Connectivity.

2. THE GOALS – What Cumbria will look like in 10 years time?

- A world-class position in advanced and technology based manufacturing, capitalising on existing industry clusters.
- A strong, sustainable and forward-looking business base, with the capacity to respond successfully to market change and global economic forces.
- High productivity manufacturing best practise in operation across the sector in Cumbria, with productivity levels in all manufacturing sectors exceeding the UK average.
- A manufacturing workforce with the right skills at all levels to ensure success in indigenous business and provide a draw to external investment.
- Increased levels of high value-added jobs, particularly in Furness, the West Coast and rural areas.
- High levels of participation in product and process innovation, research and knowledge transfer, not only in major employers but in all sizes of company.

3. OVERVIEW

3.1 Introduction

Manufacturing has long been a mainstay of the Cumbrian economy, with a tradition of iron and steel making, railway engineering, shipbuilding and textile manufacture alongside many others, and whilst many of these traditional industries have declined or even disappeared over time, other sectors have increased, and as a whole the county's economy has a disproportionately high representation within the sector – 17% of the Cumbrian workforce are involved in the sector compared to 12.5% (NW) and just 11% nationally. This equates to about 36,000 employees across the county. The situation is magnified in certain areas, for example Copeland (33%), indicating how crucial the sector is to the Cumbrian economy. As well as scale, the county also has significant diversity in its manufacturing. Excepting food processing (covered under Strategic Action Plan 4), and the two clusters of energy-related manufacturing at Sellafield and marine / defence engineering in Furness, the county also has representation in the paper, plastics, rubber, motor vehicles, and photonics to name but a few.

Apart from a significant presence, the manufacturing sector is particularly beneficial to the economy as it delivers high-added-value (around 3 times as much per job as tourism) and high-paying jobs across all sectors of the workforce. As with most manufacturing in the developed world however many Cumbrian industries have suffered a decline due to global economic forces in past decades and the sector in Cumbria consistently faces an uncertain future. Productivity across the county as a whole is on a par with the UK, (this statistic is skewed by very high-value-added in the Nuclear sector however), but compared to other developed countries is poor – France, Germany and the US manufacturers are all at least 30% more productive. Reasons for this low productivity vary, but in Cumbria, particular issues are the availability of suitable land / premises, outdated management and production techniques within some businesses, poor connectivity and access to markets, lack of a suitably skilled labour force, and examples of long-term under-investment (partially a result of the large number of branch-plants in Cumbria) all of which have a negative impact. Another threat arises from the highly specialised markets within which many companies operate, which bring short-term economic benefits but high-reliance on the health of one industry. Diversification and a forward-looking attitude are essential for the future.

3.2 Defining the 'Specialist Manufacturing' sector

It is important firstly to define what is understood by 'Specialist Manufacturing', in the context of the Cumbria Economic Plan. This is difficult, since a brief examination of the range of manufacturers within the county reveals that, excluding the nuclear sector, the County's manufacturing base is spread across a huge range of sectors. Prominent examples include shipbuilding and submersibles (e.g. BAe Systems) , chemicals; plastics/films/packaging (e.g.

Innovia Films) ; pharmaceuticals (e.g. Glaxo Smithkline); paper manufacture (e.g. Kimberley Clarke and James Cropper); food manufacture (e.g. McVities); tyre manufacture (e.g. Pirelli); clothing (New Balance Shoes) and photonics (Marl).

These industries are scattered through the county, and exist both in clearly defined 'clusters', such as the sub-sea industries in Barrow and the supply-chain cluster around Sellafield, but also as individual businesses, in less immediately obvious locations – for example Marl in Ulverston or James Walker in Cockermouth. Whatever their location though, these companies all compete within tightly defined 'niche' markets, some through preference, others through circumstance. This factor is almost universal amongst UK manufacturing today, with companies surviving on their ability to develop and produce high-quality specialist products with a minimum of cost or waste. In recognition of this commonality, the Cumbria Economic Plan defines all manufacturing companies as 'specialist'. For the purposes of the strategy however, distinction is made between the general manufacturing base and two specific industry sectors; Food and Drink, and Energy and Environmental Technologies. The former is treated separately because of its focus on process, rather than product manufacture and its close association with the rural agenda. The latter is considered of such significance (thanks largely to the Nuclear agglomeration in Copeland) that it merits separate consideration. This not withstanding, the issues raised in this paper can largely be applied to these two sectors as well.

3.3 UK Context

Manufacturing accounts for a fifth of the UK economy, employing around 3 million people directly, and many more in associated industries and services. Manufacturing accounts for 60% of UK exports and 80% of research and development, so is a key driver of innovation and technology uptake.

But manufacturing productivity in many other industrialised countries is higher than it is in the UK: around 30% more in France and Germany, and 55% more in the US. If UK manufacturers could match performance in these countries, the UK would be £70 billion better off. Returns on investments would be higher, jobs better paid, and companies more competitive.

The UK has many world-class companies and real strengths to build on, including a stable macro-economic environment, a first class science base and membership of the EU with access to the world's largest single market. But there are also significant weaknesses. UK manufacturers invest less in capital equipment on average than competitors. With a few exceptions we spend less on R&D and average skills levels are lower. The National Institute of Economic and Social Research has quantified the impact of this and other factors contributing to the productivity gap including business effectiveness at utilising capital, skills and innovation.

UK manufacturers have faced a number of short-term challenges; falling manufacturing output, low global demand for products and the relative weakness of the euro have resulted in job losses and profits have fallen to significant lows. But demand and output are increasingly picking up and there is significant opportunity to narrow the productivity gap and increase prosperity for all. The increasing pace of globalisation also presents many opportunities for increasing trade as barriers come down and capital becomes more mobile. However it also means that companies face increasing competition from goods and services produced in lower-wage economies. Companies that rely on labour-intensive products and processes will find it ever more difficult unless they evolve to meet the challenges. The evidence is clear that more innovative and knowledge-intensive products, processes and management are vital. Success is possible in every sector. For example our chemicals, pharmaceuticals, electrical and optical sectors have all grown faster than the economy as a whole. Many textiles companies that would not otherwise have survived in traditional lines

are now producing innovative products such as technical textiles with new fibres, new processes and new applications.

The UK Manufacturing Strategy is the Government's response to the challenges faced by the sector, and was developed in partnership with industry and key stakeholders, on a sectoral and regional basis. The goal of the strategy is to narrow the productivity gap, assisting companies to move up the value-added chain to more knowledge-intensive, high-skilled manufacturing and promoting investment, skills, innovation and best practice – creating a virtuous circle that builds a high value-added manufacturing sector.

Also essential are the provisions of the right business environment by delivering macro-economic stability, a modern infrastructure and the right market frameworks. There are seven pillars to the Government's approach. Each pillar sets out goals, policies and roles, with future prospects and milestones.

- **Pillar 1: macro-economic stability**
- **Pillar 2: investment** Encourage companies to invest, back innovation and provide workforces with the equipment they need. UK investment stock per worker is well below US and German levels.
- **Pillar 3: science and innovation –** Encourage innovation in its broadest sense, combined with best practice, skills and investment, as a key to competitive success and resource productivity.
- **Pillar 4: best practice –** Encouraging sharing of best practice that enables innovation and investment to be turned into profitable products.
- **Pillar 5: raising skills and education levels –** Improved skills levels contribute to higher productivity, better customer service, and to the exploitation of investment and new ideas.
- **Pillar 6: modern infrastructure –** The UK's infrastructure has suffered from historic under-investment. The Government's 10-year plan will modernise the transport network at a cost of £181 billion.
- **Pillar 7: the right market framework –** Strengthening the competition framework through the Enterprise Bill, to work within the EU and internationally for free and fair trade and to underpin an enterprise economy with sensible minimum standards in the workplace.

  Within these pillars, the Manufacturing strategy sets out a range of key actions, including:

  - The Manufacturing Advisory Service
  - Strong investment in the UK's science and research base
  - Support for development and applications of new technologies from Research Councils and Knowledge Transfer Networks
  - Support for collaborative R&D in key technologies by the Technology Strategy Board
  - The R&D Tax Credit
  - Selective finance for investment in England (available for Assisted Areas)
  - Enterprise capital funds to support investment
  - The National Skills Academy for Manufacturing and the framework of skills programmes
  - Trade support and inward investment
  - The launch of investment to support development of civil aerospace
  - Sectoral support for manufacturing sectors.

3.4 North-West Context

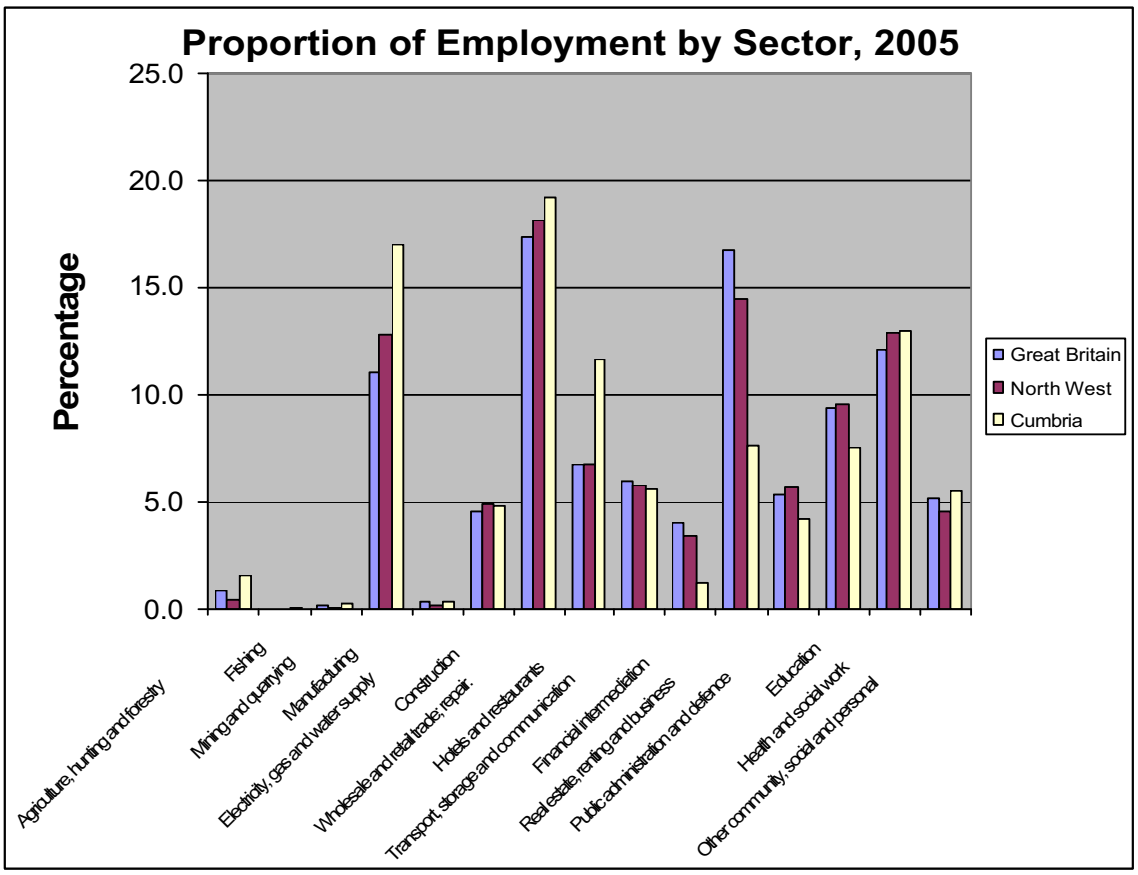
NOTE: NWDA are currently in the process of updating the North-West Manufacturing Strategy, with a draft aimed for completion in Summer 2008. Cumbria Vision are liaising closely with their representatives SQW consulting to ensure that the North West and Cumbrian strategies have close synergy. This section will be completed once information on the revised strategy becomes available.

3.5 Cumbrian Context

Manufacturing has long been a mainstay of the Cumbrian economy, with a tradition of iron and steel making, railway engineering, shipbuilding and textile manufacture alongside many others, and whilst many of these traditional industries have declined or even disappeared over time, other sectors have increased, and as a whole the county's economy features an unusually high proportion of manufacturing industry.

As can be seen in figure 1, Cumbria as a whole has a significantly higher proportion of manufacturing industries than the UK or North-West as a whole, with 17% of employees involved in the sector compared to 12.5% (NW) and just 11% (UK). This equates to about 36,000 employees across the county. There is significant disparity between areas within the county, with Furness and the West Coast having particular manufacturing concentrations (as high as 33% in Copeland), whilst rural areas have lower overall proportions – 9.8% in Eden for example.

Figure 1 – Proportion of employment by sector, 2005



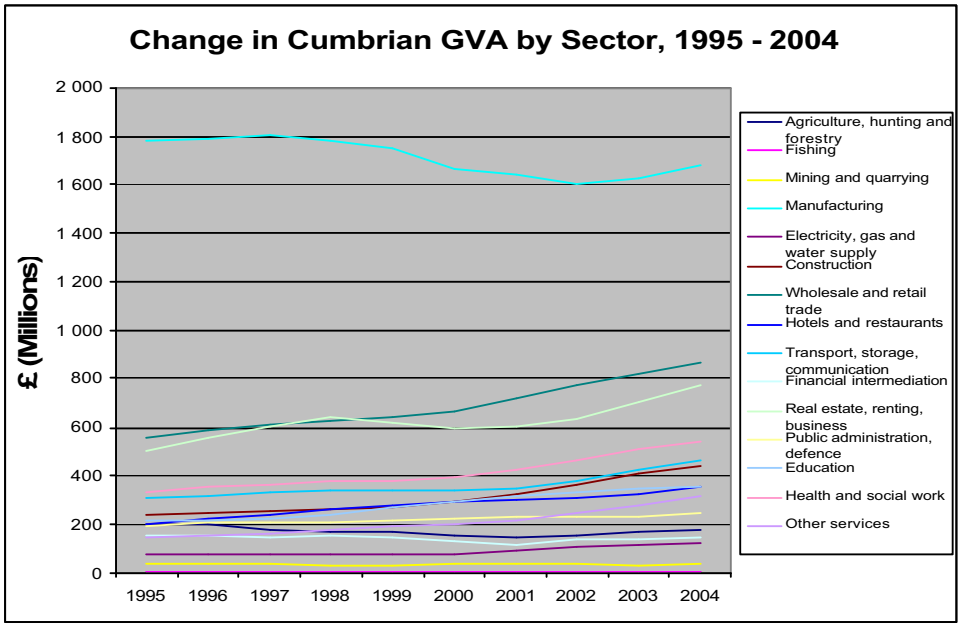
Between 2000 and 2005, manufacturing employment declined significantly across all geographical areas, but again fell at differing rates within the county. Cumbria as a whole fared better than the UK (a 14.5% fall compared to 22.5 for the UK as a whole), but certain districts – notably Allerdale and Carlisle, experienced proportionally greater losses, the worse case being Carlisle with a 31.4% drop. Surprisingly, despite changing conditions at major employers such as BAe systems and Sellafield, Barrow and Copeland fared less badly, with Copeland actually increasing the manufacturing workforce by 4.2%.

Manufacturing industries typically generate higher levels of Gross Value Added per head than other industries. For example, in Cumbria in 2004, the sector generated £1.7 billion added value, or around 25% of overall GVA, for only 14% of total employment. This further reinforces the importance of the sector to Cumbria, but despite employment in manufacturing declining more slowly in Cumbria than elsewhere in the UK, the value generated by the sector in the County actually fell by 5.6% between 1999-2004, in comparison with overall growth of 5.6% across the UK. (although recent indications are that this decline is reversing, with a positive growth rate from 2004 to date).

Table 1 – Number, proportion and change over time, total employment in manufacturing.

	Great Britain	North West	Cumbria	Allerdale	Barrow	Carlisle	Copeland	Eden	South Lakeland
Total employment 2005	2,947,888	383,343	34,032	5,809	5,869	5,691	9,904	2,104	4,655
Total employment (propotion of overall economy) 2005	11.1	12.8	17.0	18.3	22.6	11.4	35.8	9.6	10.7
Change (Numbers) 2000-2005	-834,250	-116,017	-5,760	-1,568	-382	-2,575	397	-522	-1,111
Change (Proportion) 2000-2005	-22.1	-23.2	-14.5	-21.3	-6.1	-31.2	4.2	-19.9	-19.3
Percentage change in GVA 1999-2004	5.6	1.0	-5.6	-	-	-	-	-	-

Figure 2: Change in Cumbrian GVA by sector, 1995-2004



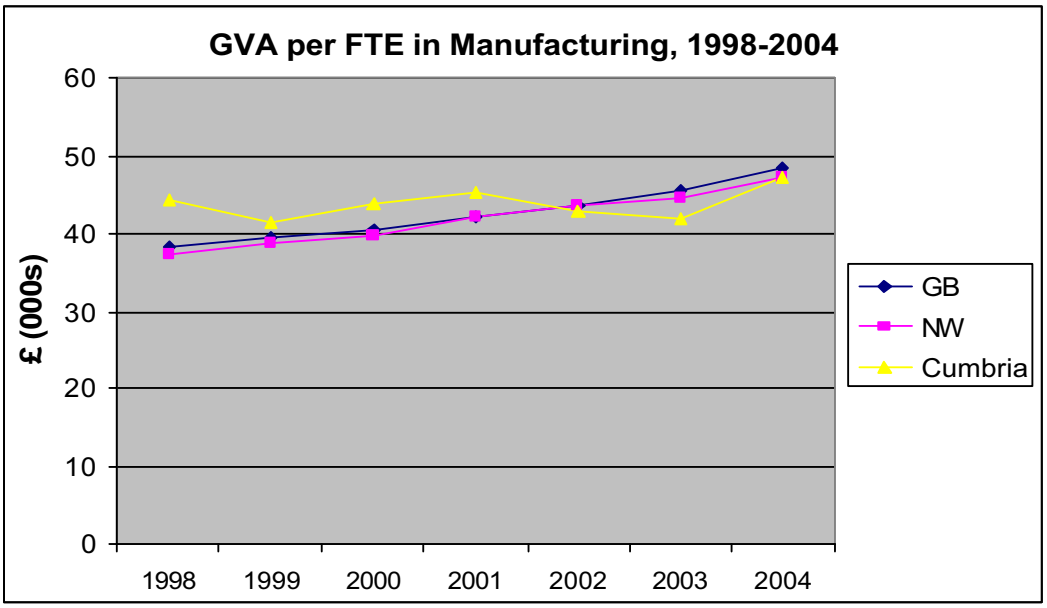
3.5.1 Cumbria's assets

There are particular concentrations of certain areas – shipbuilding and marine engineering principally in Barrow in Furness, for example; advanced nuclear and remote technologies on the West Coast. These clusters add a particular strength to the Cumbrian economy, relating to the existence of specialist firms that operate within the supply chain of these industries. The existence of these clusters demonstrates that the County can grow and retain high value-added manufacturing activities; although outside a small number of large employers, the impact of these businesses on total employment may be relatively small. There are market leaders operating in Cumbria in several other sectors notably in plastic film (Innovia), tyres (Pirelli), and pharmaceuticals (Glaxo). The retention of this existing high-value manufacturing in the County depends in part on continued investment in supply-side factors including skills, basic transport infrastructure and premises.

3.5.2 Cumbria's Challenges

Most sectors of the UK manufacturing industry have witnessed a succession of employment losses and closures in recent years, associated commonly with international competition and cost pressures. This has been especially true in Cumbria, particularly with the decline in naval shipbuilding in Furness, structural changes in the Nuclear industry and the preponderance of larger companies with branch-plants in Cumbria. In the main these losses have affected more traditional manufacturing businesses, operating in high-volume, low knowledge production. Higher technology, knowledge based and specialist manufacturing industries have fared better, but not particularly so - as Figure 3 shows, the remaining manufacturing industries in the county have maintained (overall) productivity levels that roughly match the UK average. This still remains well below the levels of other developed countries however, and in any case these statistics are skewed by the extremely high added-value in the Nuclear industry, indicating lower overall productivity in other sectors (within Cumbria, general manufacturing generates £40,732 per job compared to £198,728 in the energy sector).

Figure 3: GVA per FTE in Manufacturing, 1998-2004



Key challenges include:

- The current lack of modern, serviced sites and premises which meet the needs of manufacturers.
- Diversifying the current base and reducing the reliance on a small number of key employers, all of whom are highly susceptible to national and global forces, and the high proportion of 'branch-plant' companies; traditionally the first to suffer in times of market or general economic downturn.
- Addressing the lack of a suitably skilled workforce, at all levels from basic process workers to senior management. Importing skilled labour is difficult due to perceptions of the county, and realities such as housing availability / costs.
- Remediation of the current poor connectivity in terms of road, rail and marine transport – both in a real sense, and also in the perceptions of external investors.
- The current image of Cumbria; The County is not perceived as an ideal place to locate or invest in manufacturing, for reasons described above.
- Available premises, excellent ICT infrastructure, a ready supply of skilled labour, and the quality of life to attract investment to the county.

3.5.3 Related Strategic Action Plans.

Within the Cumbria Economic Plan, the following Strategic Action Plans have extensive cross-cutting links with the specialist manufacturing sector:

- Energy and Environmental Technologies
- Education and Skills
- Connectivity
- Enterprise and Business.

4. TECHNICAL REQUIREMENTS

4.1 Businesses

It is difficult to accurately quantify the requirements for manufacturing business growth within the diverse base within the county, however three key requirements readily present themselves. Firstly, there is a need to ensure the continued health of the handful of major employers within the county (primarily BAe Systems and the Sellafield installation, but with

some other notable examples such as Innovia Films). Secondly there is a need to strengthen the participation in supply-chain activity stemming from these companies, and grow the capacity of supply-chain companies to explore new markets. Lastly there is a need to encourage growth amongst the large number of SMEs participating in manufacturing.

4.2 Education and Skills

Skills shortages are especially acute across the manufacturing industries in Cumbria, most acutely so in intermediate (skilled and semi-skilled trades), and higher-level (engineering but also leadership / management skills), with 40% of businesses reporting hard-to-fill vacancies. Key to remediating these gaps are delivery of initiatives to encourage engagement amongst young people in Science, Technology, Engineering and Maths (STEM) and assisting the delivery of appropriate Specialist Diplomas within the 14-19 reforms, and the delivery of STEM-related subjects amongst Further Education providers.

4.3 Connectivity

Connectivity is a key issue amongst manufacturing industries, particularly those on the West Coast and Furness Peninsula which experience greater travel times to market than areas along the M6 corridor. These issues are explored in depth in Strategy Action Plan 11: Connectivity, but can be summarised as a need for improvements to road (especially the A66, A590 and A595 trunk routes), rail (particularly improved freight and passenger services on the West Cumbria line) and marine (Ports of Barrow and Workington) access. More ambitious, and potentially transformational actions, include the delivery of the 'Bridge over the Bay' to Furness.

4.4 Premises

Developing an adequate supply of suitable, modern, properly serviced and accessible land and premises is a fundamental issue in the development of Cumbrian manufacturing. In West Cumbria and Furness, there is, on paper at least, an excess of available land (primarily redundant land from defunct 'traditional' heavy industries) but this is in the main unappealing for development on account of contamination, poor accessibility, inappropriate location and lack of infrastructure. Along the M6 Corridor and in rural areas, the issues are of lack of any land at all for development due to land costs and planning restrictions. In both cases the primary opportunity lies in development of a restricted number of key strategic sites, examples include expansion of the Gillwilly Industrial estate in Penrith; expansion of Ramsden Business Park in Barrow; Westlakes Science Park, Whitehaven; and Kingmoor Park, Carlisle; and delivery of major employment sites such as Barrow Waterfront and the proposed industrial park at Junction 36 of the M6.

5. ACTIONS AND IMPACT BY LOCATION

5.1 West Cumbria

Manufacturing associated with the nuclear sector is crucial to Copeland, with 33% employment in the sector. In the more rural parts of Allerdale this importance diminishes slightly but the sector still has a strong base, including Innovia Films (Plastics) James Walker (sealing technology) and M-Sport (Advanced Automotive). Critical issues include distance/ connectivity to markets; lack of modern, accessible and properly serviced land and premises; and the availability of a suitably skilled and motivated workforce. Key priorities include:

- Continuing development of nuclear supply chain opportunities and increased identification of opportunities in other markets.
- Ongoing development of key employment sites, including Westlakes Science Park and Lillyhall.

- Ongoing improvements to transport infrastructure, including A66/A590 trunk roads, West Cumbria railway and port of Workington.

5.2 Barrow

Highly reliant upon the manufacturing sector, with a high-technology cluster of advanced engineering, and defence nuclear around BAe Systems combined with a wide range of other industries including paper manufacturing, chemicals and sub-sea technology. Total employment is around 6,000. Issues include reliance on a single employer (BAe), connectivity and quality of land and premises. Key priorities include:

- Continuing development of key clusters and supply chain opportunities – marine, defence nuclear, sub-sea, and increased identification of opportunities in other markets.
- Ongoing development of key employment sites, including Ramsden Business Park, Barrow Waterfront.
- Ongoing improvements to transport infrastructure – A595, West Cumbria railway, port of Barrow.

5.3 Carlisle

Manufacturing is primarily in food processing (covered in Food and Drink SAP) but with strong components of rubber and plastics (e.g. Pirelli Tyres) and engineering, both basic and advanced. Total employment excluding food is around 4,000, connectivity is excellent but availability of affordable land and highly-skilled workforce are barriers to growth. Key priorities include:

- Ensuring availability of modern land and premises; continued development of Kingmoor Park; redevelopment of existing underutilised land within the city.
- Targeted skills and education provision to develop manufacturing/engineering skills base.

5.4 Eden and South Lakeland

Have surprising manufacturing diversity considering their rural nature, with the solid state lighting cluster in Ulverston, specialist fibre products and turbine engineering in Kendal, giftware production in Penrith and mineral processing in the Eden Valley. Employment over the two districts equals around 7000. A fundamental issue is the availability of suitable land and premises for development. Key priorities include:

- Development of existing employment sites and identification of new opportunities for development of sites. This will require a combination of investment and strategic planning.

6. THE STRATEGY

SM1 Improve Productivity in Existing Manufacturing Industries

Key Objective – Raising the productivity of Cumbrian manufacturing industries to meet and exceed the regional and national averages

Key Actions –

a) **Encourage the use of lean manufacturing techniques** and capitalise on the specialist help and advice of the Manufacturing Institute- Including targeting of specific key employers.

b) **Maximise the benefits of emerging technologies** in the energy sector (See Strategy Action Paper 1.)

c) **Develop collaboration between indigenous manufacturers** to share best practise and identify potential opportunities for joint working.
d) **Develop a framework for RTD for Cumbrian manufacturers** based on the best practice learned from other EU regions.
e) **Promote enterprise and innovation to SME manufacturers** and provide investment to specific industry clusters
f) **Develop capacity to increase uptake of EU regional and national grants** through the provision of specialist guidance and support in identifying and securing assistance.
g) **Encourage business HE/FE collaborative working,** particularly in key and knowledge-based sectors, and capitalise on opportunities such as the post-graduate campus proposal at Ambleside.
h) Increase delivery of **Knowledge Transfer Partnerships with a particular focus on manufacturing,** and maximise the opportunity KTP's provide as a way of retaining graduates within Cumbrian manufacturers.

Key Indicators
- Manufacturing GVA per head (UK Index)
- Investment in R&D?

SM 2 Expand the manufacturing business base in key sectors

Key Objective – Cluster and supply chain development in those sectors delivering growth and high GVA for the county - marine and sub-sea, defence, photonics, advanced flexible materials and other advanced engineering.

Key Actions –
a) **Instigate a programme of economic monitoring and evaluation** to identify potential changes in the market situation, and advise companies how to respond to these changes.
b) **Develop existing manufacturing clusters** by stabilising existing first-tier companies, encouraging growth in indigenous second-tier firms and assisting companies outside these growth sectors to participate in the market.
c) **Deliver a programme of supply chain development** across all manufacturing sectors, developing supply chains both inside and outside the county.
d) **Establish a clear branding line for Cumbrian manufacturers.**

Key Indicators
- Numbers in employment in manufacturing
- Overall manufacturing GVA

SM 3 Provide the right environment for the growth of manufacturing businesses in Cumbria

Key Objective – Infrastructure and skills supply that make Cumbria the first choice for manufacturing activity.

Key Actions –
a) **Provide a ready supply of appropriate land and premises**, suitable for the needs of modern manufacturing, across all areas of the county (See Strategy Action Plan 9 Business and Enterprise)
b) **Identify opportunities for development of 'supplier chain parks' around key sector business within the county, providing a physical locus around which to develop key supply chains.**

c) **Deliver leadership, management and business planning programmes** and initiatives to help companies attract and retain skilled graduate workers.
d) **Engage manufacturing employers to identify and meet current and projected skills gaps, with the goal of evolving 'work-ready' skills provision across the county.**
e) **Up-skill the workforce at all levels** with industry ready skills, to provide a ready labour supply – e.g. ESOL / Skills For Life, specialist diplomas, apprenticeships, work-based learning (Train to Gain etc.), foundation degrees and higher qualifications – See Strategy Action Plan 7 for details
f) **Provide accessible and practical capital assistance and inward investment grants**, focused on results rather than targets, to all potential growth sectors (not just currently defined ones)

Key Indicators

- Number of employers identifying skills gaps
- Hectares of land available for manufacturing development.

7. DELIVERING THE STRATEGY – ACTION PLAN

7.1 The following Action Plan is a comprehensive list of all identified programmes, projects and activities that have the potential to make a positive contribution towards achieving the vision for Specialist Manufacturing in Cumbria, as detailed in above. To successfully deliver this Action Plan will require a co-ordinated approach, and commitment and investment from public, private and voluntary sectors. The Action Plan does not therefore relate to particular funding bodies or programmes (for example the North-West Development Agency Single Programme, or the European Regional Development Fund) and is not a representation of any future Sub-regional Action Plan.

7.2 The red/amber/green classification in this Action Plan reflects priorities in terms of timescales for delivery only, in recognition that a number of actions (particularly major, transformational projects) will take substantial time to develop and deliver, whilst others can be delivered within a much shorter timescale. Please also note that the classifications are based on a timetable for final completion, so a mixture of short-term and long-term components will be listed by the targets for long-term completion.

7.3 Within each colour group, projects are listed in order of their reference number which relates to the key actions within section 6 of the Strategic Action Plan. Neither the colour-coding nor the numerical listing within each colour classification, are indications of the importance of actions relative to one another.

7.4 A key role of Cumbria Vision will be to monitor, evaluate and update the Action Plan on an ongoing basis. This process will be undertaken in close consultation with stakeholders from the county and region.

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Timeframe	Ref	Activity	Detail	Allerdale	Carlisle	Copeland	Eden	Furness	South Lakeland
	SM1.1	Manufacturing Advisory Service – Lean Manufacturing Support Programme.	Regional Programme.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 1.2	Manufacturing Advisory Service; High Impact Productivity Programme	Cumbria-specific programme working intensively with selected companies to deliver comprehensive LM package, including developing linkages with Business Link specialist brokerage. 3 year initial programme.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 1.3	R&D Capacity Building and Awareness Raising Programme	To raise awareness and increase uptake of regional and national grants and R&D tax credits amongst Cumbrian businesses.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 1.4	Promote Enterprise and Innovation to SMEs	Including specific additional investment to key sectors and clusters	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 1.5	Develop a Framework for RTD for Cumbria	Based on the best practice learned from other EU regions.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*

Immediate	**3 – 5 years**	**5 -10 years**

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	SM 1.6	Knowledge Transfer and Innovation Partnerships	Research grants for SME's to grow RTD & Knowledge Transfer. Delivery Body - University of Cumbria	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 1.7	Collaborative Innovation Partnerships	Development of innovation Partnerships and encouraging businesses to participate.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 2.2	The Cumbrian Manufacturing Brand	Develop an identifiable brand for Cumbrian manufacturers, in line with the wider Cumbrian brand and the 'Team NW' approach.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.1	Agree a Range of Employment Sites to be Developed in Cumbria over the next 15-20 yrs	Cumbria Vision will work with the County Council and District Councils to agree a range of employment sites through the Regional Spatial Strategy and the Local Development Framework.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.2	Define Key Regional Employment Sites	Currently there are only two Regional Employment Sites listed in the Regional Economic Strategy (RES).- Westlakes and Kingmoor Park. Development of employment land framework will allow the NWDA to designate a further two key regional employment sites	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.3	Define Sub Regional Employment Sites	Work with Cumbria County Council and District Councils to define a range of available sub regional employment sites in each district	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*

Immediate	**3 – 5 years**	**5 -10 years**

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	SM 3.4	Define Local Employment Sites	Work with Cumbria County Council and District Councils to define a range of available local employment sites in each district to enable business development and growth over next 20 years	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.5	Cumbria Leadership and Management Programme	Delivered initially in association with public sector employers	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.6	Delivery of the STEM Centre and Programme	Establishing a base for the STEM (Science, Technology, Engineering and Maths) programme and enhance current activities to raise enthusiasm and awareness amongst young people.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.7	The 'Work-ready' Skills Agenda	Based on the findings of the Skills Research Programme and existing activities in the county, develop the 'Work-Ready' skills agenda for Cumbrian manufacturers and obtain from all relevant agencies and providers.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.8	Manufacturing Capital Grant Scheme	Provide accessible and practical capital assistance and Inward Investment grants.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*
	SM 3.9	Manufacturing Inward Investment Programme	Delivered through Invest in Cumbria; various actions including financial incentives.	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*

Immediate	**3 – 5 years**	**5 -10 years**

	SM 2.1	Economic Monitoring and Evaluation	Ongoing programme	*Allerdale*	*Carlisle*	*Copeland*	*Eden*	*Furness*	*South Lakeland*

Immediate	**3 – 5 years**	**5 -10 years**