

Cabinet

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The Manufacturing Sector in County Durham



Report of Corporate Management Team

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Purpose of the report

1. This paper builds upon the paper presented to Cabinet in May, outlining the success in attracting Hitachi Rail Europe to County Durham, where it was recommended that work was carried out to ensure that Durham was well-positioned to attract further investment.
2. This paper therefore reports the importance and value of the engineering and manufacturing sector to the economy of County Durham, and outlines opportunities to retain and create jobs, generating economic prosperity in line with the Council's Altogether Wealthier objective.

Background

3. Manufacturing¹ companies are significant contributors to economic prosperity in the UK: they are more likely to engage in R&D, to innovate, to export, they pay workers more, and are more resilient and more productive than the UK's economic base as a whole. Large firms create the most value: 87% of manufacturing companies in the UK employ less than 20 but it was the firms with 250 or more employees that created 88% of the gross total value in 2009.²
4. Employment in the UK manufacturing sector represents approximately 8% of all manufacturing employment in the European Union.³ Within the UK, it

¹ The Standard Industrial Classification (SIC) code lays down the make-up of the manufacturing sector: Food, beverage and tobacco products; Textiles and textile products; Wood and wood products; Pulp, paper and paper products; Publishing and printing; Coke, petroleum products and nuclear fuel; Chemicals, chemical products and man-made fibres; Rubber and plastic products; Other non-metallic mineral products; Basic metals and fabricated metal products; Other machinery and equipment; Electrical and optical equipment; Transport equipment; Other manufacturing. It is part of the overall Production SIC code which additionally includes Energy and Water. The term 'manufacturing' in this paper is used to include engineering and technology.

² 'Manufacturing Matters: A New Era of Opportunity and Challenge for the UK' Government Office for Science/Foresight 2013.

accounts for 10% of total employment, in contrast to countries such as Germany where it accounts for around 20%.

5. There are a number of activities which are partly or wholly derived from manufacture: transport and logistics, construction, supply of electricity and water, business, financial and computer services, and research and development. At a UK level, the overall multiplier of manufacturing for GVA contribution is 1.76.⁴
6. Productivity growth and specialisation in high value-added production, coupled with its impact on the supply chain should deliver high value employment growth.

County Durham

7. The manufacturing sector forms a major part of the County's economy:
 - It generates 20% of the County's GVA (14% North East, 11% UK).⁵
 - According to the above 1.76 multiplier, an additional 15.2% GVA can also be attributed to manufacturing from direct supply chain GVA.
 - It employs 15% of County Durham residents (12% North East, 10% UK).⁶
 - Contribution per job is the third highest in the County at £37,685. It should be noted that R&D activity is counted within the business services contribution which is the highest at £62,978.
 - It creates a high level of net disposable income. Average annual pay for North East residents is £23,367 and the average North East manufacturing salary is £29,900.
 - The pay-rise last year was 5.4%, making them the best paid employees in the region.⁷
 - Turnover is significant: while company figures are usually confidential we can give an example of just seven companies generating £1,123,000,000 in the County.⁸

³ Eurostat 2012

⁴ ONS input/output tables indicating consumption by each sector.

⁵ ONS Regional Accounts

⁶ ONS Labour Force Survey

⁷ Manpower Survey July 2014

⁸ GT Group, Ineos, 3M, Caterpillar, Thorn, Gestamp Tallent, GSK

Table 1 below illustrates this data in context.

	GVA		Employment		GVA contribution per job	Average salary (North East)
	£	%	Number	%		
Durham CC (2011)⁹						
Manufacturing	1,270	20	33,700	15.4	£37,685	£29,886
Energy and Water	251	4	4,700	2.1	£53,404	£29,005
Construction	449	7	16,500	7.6	£27,212	£27,091
Financial and insurance activities, real estate, business services (incl R&D)	1,184	18	18,800	8.6	£62,978	£25,899
Public administration; education; health	1,768	28	71,600	32.7	£24,692	£23,795
Distribution; transport; accommodation and food, communication	1,247	20	54,400	24.9	£22,922	£21,701
Other services and household activities	172	3	13,100	6	£13,129	£16,306
Agriculture, forestry and fishing	66	1	2,000	0.9	£33,000	£14,876

Table 1: County Durham industrial profile by GVA, employment and salary

Sector profile

8. There are 815 companies working in manufacturing and engineering. 545 are micro-sized (0-9), 190 are small (10-49), 70 are medium (50-249) and 10 are large (250+).¹⁰ The only 'primes' (like Nissan) in County Durham are Hitachi Rail Europe, Caterpillar and GSK. High technology manufacturing happens across the County's industrial sites, but is focused at NETPark with plcs such as Kromek and Filtronic, and the recent attraction of Compound Photonics to Newton Aycliffe.¹¹

Challenges and opportunities for manufacturing in County Durham

9. Capital investment: Starting up or locating a manufacturing business runs into millions, an example is Hitachi Rail Europe which is investing £82M in County Durham just in the start-up phase. Production development and diversification can also cost £100,000s to £millions. Availability of capital to fund these developments is very competitive, with County Durham sites having to compete with sister global locations for limited funds. The success of manufacturing companies in County Durham accessing the Let's Grow fund is ample evidence of how such funding is needed in this sector.

⁹ Please note these figures are rounded: GVA and employment are collected across slightly different categories.

¹⁰ ONS Business Counts

¹¹ Profiles of some of the major employers in the County are appended to this report.

10. Market opportunities and supply chain: companies are generally competing globally for contracts (often with branches of their own company located elsewhere in the world). This brings major opportunities for export-led economic activity but maintaining competitiveness in a volatile world is a constant challenge. A number of our mid-sized companies are dependent on one customer or one sector which leaves them vulnerable to market changes. New markets are being opened up by the emerging economies, climate change and changing regulation, and demographic shifts such as the ageing population. Technology is driving major change in mass personalisation, distributed production, and digitised manufacturing chains, and the global fragmentation of the value chain all present new opportunities for more export, inward investment and reshoring, the co-location of R&D with production, and potential “phoenix” industries. The import activity of companies can uncover opportunities for inward investment, if there are commonalities across the supply chains, a case can be made to create new activity within the County, near their markets. This might also create opportunities for indigenous companies to secure contracts and diversify.
11. Skills: the North East Independent Economic Review identified a number of priority sectors that will be the focus of significant new direct and indirect job opportunities in the region, including advanced manufacturing, engineering, energy and renewables. To support the growth of these sectors, it is critical that the key skills (both current and future) are available and/or being delivered locally. The 2014 Institute of Engineering & Technology study shows the demand for engineers and technicians remains high with over half of companies looking to recruit in order to expand their businesses. However, the evidence suggests that there are already difficulties in meeting the skills need:
 - Manufacturing and engineering have an ageing workforce with a ‘missing generation’ of younger people coming into these sectors.¹²
 - There is a reduction in the numbers of young people studying Science, Technology, Engineering and Mathematics (STEM).
 - As a contributory factor to the lower uptake of STEM subjects, it was reported that school Information, Advice and Guidance services have a limited understanding of emerging sectors and their opportunities, the occupations they involve, the skills and qualifications required to enter the sector, and the opportunities that the sector can offer.
 - Similarly, vocational career routes are not as strongly promoted by schools as academic routes.
12. The challenge may become more severe over time: nationally, the number of level 3 engineering-related apprenticeships has actually dropped from 27,000 to 23,500, falling well short of an annual demand of approximately 69,000.

Support for the manufacturing sector in County Durham

¹² Regeneris Consulting, 2010; University of Sunderland, 2013

13. Durham County Council supports manufacturing in a variety of ways as the following table illustrates:

Attracting and retaining companies and jobs	<ul style="list-style-type: none"> • Integrated Inward Investment Service and Strategic Account Management Programme across Durham
Contracts and supply chain, Diversification, Winning investment	<ul style="list-style-type: none"> • Sector development strategies • Internationalisation (reshoring, export, etc.) • NETPark, the specialist environment for the invention-innovation-manufacturing journey • Business Park Communities at Newton Aycliffe, Peterlee, etc. • High Value Manufacturing Catapult at NETPark • Centre of Excellence for the Satellite Applications Catapult at NETPark • NETPark Net, the innovation community of over 320 businesses • Business Innovation Gateway, linking Durham University and businesses • Support to access finance from Regional Growth Fund, Advanced Manufacturing Supply Chain, Let's Grow, venture capital, etc. • Business Growth Fund mechanism
Skills	<ul style="list-style-type: none"> • County Durham Apprenticeship Strategy and Action Plan, and Associated Apprenticeship Wage Incentive scheme addresses youth unemployment and ageing workforce • SEMTA, the sector skills council responsible for engineering and manufacturing, has formed the Skills Alliance for Advanced Manufacturing to develop more effective recruitment, retention and progression models • The South Durham University Technical College, secured by a partnership between Sunderland University, Hitachi and Gestamp Tallent • All four of Durham's colleges provide classroom-based training or apprenticeship opportunities, alongside a range of specialist work-based learning providers. • Training providers have developed niche training opportunities such as the Welding Academy, and elements of the Core facility at South West Durham Training focussing on CNC and associated operations responding directly to sectoral skills shortages • The County Durham Apprenticeship programme run by DCC, funded by the National Apprenticeship Service, the Coalfield Regeneration Trust and DCC has led to over 550 new apprenticeships in County Durham SMEs since the end of 2010. Of these, 20% are in engineering/performance manufacturing operations

Table 2: Durham County Council support for manufacturing

14. Overall, data indicates that we assisted manufacturing companies in 2013/14 to create/retain 1,137 direct jobs, contributing £42.8M to the County's GVA (plus a further indirect contribution of £32.6M) and securing £102M in capital investment into County Durham.
15. While County Durham's manufacturing sector is doing relatively well, the private sector in County Durham is currently too small: there is an opportunity to increase economic activity in the County in a highly valuable section of the private sector in which we already have strengths:
 - Its contribution to our economy is still higher than most other regions
 - It creates and maintains thousands of jobs
 - The jobs are some of the highest-paid in the region
 - It attracts and retains globally important inward investors
16. As the recovery continues, there will be increasing opportunities to attract more manufacturing into the County. But others will be competing for them. To capture these opportunities we will need to be better positioned nationally and internationally as a place for manufacturing and better connected to emerging trends.
17. The engineering and manufacturing sector in County Durham is demonstrably strong and vital to the economy of County Durham, and there are already a range of activities being undertaken to sustain the sector. To extend the supply chain, to win new companies, to help existing companies to stay and grow, to create new jobs and to position County Durham nationally and internationally as a place for manufacturing will require us to increase the levels of activity: some potential examples of this are listed below.
 - Use the opportunity of ERDF and ESF to create a tailored skills programme for County Durham, ensuring that interventions from primary school to executive education are matched to the needs of County Durham companies now, and investing for the next 20 years.
 - Commission an external supply chain analysis of the top 200 companies in County Durham to uncover investment and contract opportunities.
 - Assemble a comprehensive manufacturing online market opportunity prospectus for County Durham detailing customers, supply chain capabilities, skills, expertise, and land and sites available across the County.
 - Ensure that is linked to proposition development such as that for Aykley Heads, a location for companies in services such as financial technology, as demand for these activities will be increased by the presence of more manufacturing in the County.
 - Implement a comprehensive targeted inward investment strategy for 2015 in light-based technologies and manufacturing, to take advantage of the International Year of Light and the place-marketing messages for County Durham.

- Work with the Aycliffe Business Park Community to understand the potential for Newton Aycliffe, now that the addition of Newton Park has made it the biggest industrial estate in the North East.
- Establish a Future Manufacturing Centre in County Durham.

Next steps

18. In order to maximise the opportunities for County Durham's economy from the manufacturing sector, it is recommended that a short term, time limited task and finish group be established. It is proposed that this group:

- Explores and verifies the challenges and opportunities for the manufacturing sector in investment, skills and market access
- Develops a plan, outlining short, medium and long term actions which would maximise the economic impact of both existing companies and of attracting new inward investors
- Develops a framework for prioritising actions in terms of return on investment
- Highlights those actions with most impact in the short, medium and long term
- Considers any resource implications for prioritised actions and suggests potential funding routes
- Considers and recommends which organisation should lead on which actions
- Presents a summary of recommendations, rationale, expected results, and lead organisations to Cabinet.

19. Representation on the Task and Finish Group is proposed as follows:

- The Cabinet Member for Economic Regeneration is asked to chair the group, on a similar basis to the recent successful approach taken to the Social Value Task Force
- A senior business person from the manufacturing sector is asked to be Deputy Chair for the group
- Appropriate representation from manufacturing networks should be considered and selected, e.g., the EEF and/or the Engineering Fora
- Appropriate representation from the NELEP and/or BIS (Local) should also be considered to ensure alignment with policy opportunities
- The relevant Skills Council (SEMTA) should be invited to ensure the skills agenda is taken into account
- Five senior business leaders from manufacturing companies within County Durham should be selected, ensuring a balance of industry sectors, of size and maturity of companies, and of indigenous and inward investors
- Secretariat support is provided from Business Durham.

This public and private sector partnership is suggested to ensure that any recommendations meet the needs of manufacturing sector within County Durham with the aim of boosting its contribution to the County's economy.

20. The timescale of the group's work is suggested to be over three to four months, starting from January 2015 and reporting back in spring 2015.

Conclusion

21. Stimulating further activity in this sector will have a substantial impact on County Durham's economic prosperity, given the sector's high return on investment in terms of GVA contribution, stimulation of additional economic activity in its supply chain, and net disposable income for County Durham residents. It is suggested that Cabinet accepts our recommendation to establish the Manufacturing Opportunities Task and Finish Group.

Recommendation

22. It is recommended that Cabinet:
 - i. Note the establishment of a Manufacturing Opportunities Task and Finish Group which will commence its work in January and report back in late Spring 2015.

Contact: Simon Goon, Managing Director, Business Durham 03000 265510

Background Documents:

House of Commons Library (June 2014) Manufacturing: Statistics and Policy
BIS (2013) Professor John Perkin's Review of Engineering Skills
University of Glasgow (2013) North East LEP Skills Action Plan Evidence Base
Government Office for Science (2013) Manufacturing Matters: A New Era of Opportunity and Challenge for the UK

Appendix 1: Implications

Finance –

There are no financial implications to the establishment of a Task and Finish Group.

Staffing –

The Task and Finish Group is deliverable within existing staff resource.

Risk –

Not applicable.

Equality and Diversity/Public Sector Equality Duty –

Not applicable

Accommodation –

Not applicable.

Crime and Disorder –

Not applicable.

Human Rights –

Not applicable.

Consultation –

Not applicable

Procurement –

Not applicable.

Disability Issues –

Not applicable.

Legal Implications –

There are no legal implications to the establishment of the Task and Finish Group, as its role is purely advisory and to recommend a course of action to Cabinet.

Appendix 2: Examples of manufacturing companies in County Durham

3M

Location	Newton Aycliffe
Established¹³	1965
Ownership	US
Activity	The plant develops IP and manufactures respirators and disposable masks: disposable respirators, reusable respirators, powered air respirators and supplied air respirators, as well as sprays for the automotive sector.
Markets	Health care and safety, security and protection environment, i.e., safe working environments & automotive sector
Customers	NHS, health services for global pandemics,
Jobs	320, new product development, polymer engineering, operatives, sales,
Apprentices	Three
Collaboration	New product development mainly in house

Caterpillar

Location	Peterlee
Established	1974
Ownership	FDI USA
Activity	Global manufacturer of articulated trucks
Markets	95% export global - USA, Asia, South America
Customers	Mining and extraction industries, large scale construction projects
Jobs	Over 1000, design, engineering and operatives, warehousing, procurement
Apprentices	Approx. 10 apprentices per annum across the range of disciplines
Collaboration	New product development is largely undertaken in-house. Helped to establish The Weld Academy, to overcome the lack of trained welders. It has supported the SWE Stimulated Working Environment incorporating CPS Caterpillar production Systems to help individuals understand the principles of a lean organisation, assist with team building, and to give learners experience of a real working environment. (http://ildnortheast.co.uk/)

Compound Photonics

Location	Newton Aycliffe
Established	2013 (took over plant originally built by Fujitsu)
Ownership	UK (registered in London)
Activity	Projector devices, within mobile phones, laser technologies for use in defence and consumer electronics
Markets	Mobile communications, defence, automotive, games manufacturers

¹³ Established date refers to date established in County Durham.

Customers Confidential
Jobs Currently 100 research and development, quality control, manufacturing engineers, lab technicians, office, HR, finance and administration. Expects to recruit at least another 100.
Apprentices None yet
Collaboration New product development is in house and in conjunction with the US-based manufacturing facilities.

Gestamp Tallent

Location Newton Aycliffe
Established 1948
Ownership FDI Spanish (originally a County Durham start up)
Activity Design and manufacture of chassis and other automotive parts through use of over 800 robots
Premises 102,000 sq m
Markets Automotive, UK, some export to Europe, Japan and China
Customers Volvo, Nissan, JLR, Ford, VW, Honda, BMW, Mercedes
Jobs Over 1000, design, engineering and operatives, warehousing, procurement
Apprentices Usually approx. 12 apprentices per annum across the range of disciplines
Collaboration Durham, Sunderland, Warwick and Loughborough Universities and ImechE.
Collaboration with Sunderland University and Hitachi Rail Europe for the University Technical College

Glaxo Smith Kline

Location Barnard Castle
Established 1945
Ownership UK
Activity Pharmaceutical Manufacturers & Suppliers; Barnard Castle has two product streams, namely steriles & liquids and topicals & orals, and makes a range of dose forms including syringes, vials, inhalers, pumps, tubes, tablets, capsules and bulk granules. Products include sterile goods such as injection ampoules, antibiotics and creams, ointments and liquids such as asthma sprays.
Markets Global
Customers Healthcare
Jobs 1,100, manufacturing, quality control
Collaboration Little, it is a manufacturing site not R&D

GT Group

Location Peterlee, Newton Aycliffe and Consett
Established 1983
Ownership UK (County Durham registered)

Activity GT Group is a product development company in environmental engineering, supplying a broad range of products (such as Breakaway couplings, Drybreak couplings and Exhaust Gas Control Valves) to the automotive, oil, gas and petrochemical industries. It has a number of subsidiaries including: GT Coatings, GT Project Engineering, GT Precision Products, Alpha Process Controls and GT Seals & Mouldings

Markets Automotive on and off highway, Oil & Gas, construction, mainly export

Customers Volvo, Scania, JCB, Caterpillar, BP, Shell, Total to name a few

Jobs 300 in R&D, engineering, maintenance, IT, machine operatives, HQ office

Apprentices Engineering and maintenance

Collaboration Leeds, Sunderland, Huddersfield, Universities

Hitachi Rail Europe

Location Newton Aycliffe

Established 2013

Ownership Japanese

Activity Carriage manufacture for passenger rail sector

Markets UK, Europe and Middle East

Customers UK Dept of Transport IEP Programme

Jobs 20 currently in HR, Manufacturing, Project Management, Procurement will rise to 730 MPD and Hitachi Rail Europe awarded the construction £82m construction contract to Shepherd, which is together with its sub-contractors supported a further 150 jobs on site.

Apprentices 1 currently, but engaging with this year's intake at South West Durham Training.

Collaboration Sunderland University via the UTC, has met with all the region's universities.

Thorn and Tridonic

Location Spennymoor

Established 1951

Ownership Zumtobel, Austria

Activity Lighting equipment manufacturer; design, development and manufacture of lighting solutions, fittings, electronic control gear

Markets Commercial lighting for interiors and outdoor, global

Customers Supermarkets, schools, highways, airports, sports stadia

Jobs 800 across both local sites

Apprentices Electrical and mechanical

Collaboration Durham, Newcastle, Leeds Universities

Other Thorn has developed the Thorn Academy of Light (TAL) as a resource for continuing professional development for the Zumtobel Group, to inform the lighting and professional services industry, and schools. A vital supporter of FBM