

Engineering

January 2007

Sector Profile

This overview deals with industrial manufacturing in its broadest sense, covering the following sectors:

- transport equipment;
- other industrial machinery and equipment;
- electrical & optical equipment (see separate profile on Electronics)
- basic and fabricated metals;
- chemicals and man-made fibres.
- rubber and plastic products;

See also the separate profile on Aerospace.

Overview

Summary	<p>The engineering sector had a turnover of £4,917 million in 2004. The top three subsectors within that are:</p> <ul style="list-style-type: none">• electrical & optical equipment - £1,289 million• transport equipment - £927 million• rubber and plastic products - £807 million¹
Employment	<p>Just over 45, 000 are employed. The top three subsectors within that are:</p> <ul style="list-style-type: none">• transport equipment – 10,181• electrical & optical equipment – 9,652• basic and fabricated metals – 7,757
Key Markets	<p>Great Britain and the Republic of Ireland remain the top markets for export sales. Germany, France, the Netherlands and the United States are the key markets outside the British Isles. ²</p>
The Future	<p>The manufacturing sector as a whole is likely to contract in employment terms, both in Northern Ireland and elsewhere, as it undergoes a period of rapid change. Cost sensitive export sectors such as transport equipment will be most acutely impacted. However productivity improvements will mean that overall GVA will continue to rise by an average of 2.4% per annum in the period to 2014. Key</p>

¹ From Northern Ireland Annual Business Inquiry December 2005

² From Northern Ireland Manufacturing Sales and Export Survey November 2005

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sectors for potential growth are:

- Bio-technology products including pharmaceuticals
- Environmentally sustainable products including recycling activities and those linked to renewable energy.

Engineering Subsectors

Agricultural Engineering

The UK market is valued at over £958m in 2004. Throughout much of the industry the barriers to market entry are relatively low reflecting the low technology utilised in the production of many types of agricultural equipment. This results in a highly competitive market environment. There is evidence of a high level of brand awareness and brand loyalty amongst end users.

The market for agricultural machinery includes a wide variety of plant and equipment. The clearest distinction is between tractors, trailers used for agricultural purposes and other agricultural equipment. The market for tractors comprises a large proportion of the total expenditure on agricultural equipment (approx 50%) and is, in many ways, distinct from the market for other agricultural equipment.

Current Issues within Agricultural Engineering

- Given the competitive nature of the UK market, local companies have to look into new markets, through diversification or export development and develop more value-added products to differentiate themselves from their competition.
- Market is dominated by machinery distributors who require a high level of support from manufacturers.
- Manufacturers highlight the shortage of skilled labour and demands for higher wage rates as major inhibitors to growth.
- The dynamics of the EU structures and funding, particularly CAP, play a significant part in the trends within the industry and the enlargement of the EU will undoubtedly impact further on the competitive nature of the sector in the future.

Automotive Engineering

The automotive sector comprises 30-40 companies with a combined turnover of £535m and employing nearly 5,000 staff.

Companies in Northern Ireland manufacture a range of products, including engine components, tyres, commercial vehicle bodybuilding and trailers.

Key companies include Michelin, Montupet, Ryobi, Wrightbus, Visteon, Schrader Electronics and SDC Trailers.

Initiatives in Automotive Engineering

Development of NI spoke of the [Automotive Academy](#) to ensure NI companies have access to world class training opportunities.

Materials Handling

The materials handling sector in Northern Ireland accounts for more than £450m turnover (annual) with over 75% of sales coming from markets outside of NI. The sector is responsible for an estimated 2400 jobs, many of which are in rural areas.

The sector comprises companies engaged in original equipment manufacture (OEM), component manufacture (for OEM installation) and sub-contracting (to OEMs). It falls into 3 main categories: forklift truck manufacture (e.g. NACCO); quarry plant and recycling equipment (e.g. Terex); suppliers to Terex and other OEMs.

NACCO is located at Craigavon and employs around 800 people. However, of particular interest is the unique clustering of OEMs and suppliers in County Tyrone. This is largely due to the historical significance of Powerscreen (Terex), and manufacturers such as Finlay (BME), Extec and others. This cluster of OEMs and their suppliers accounts for a significant number of manufacturing jobs in County Tyrone.

Key Issues

The sector has a high level of exports, and aggressive export development. Overall, it enjoys good market growth prospects with a relatively high level of R&D.

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However there are weaknesses to be addressed. Some shop floors are informally run. There is a high dependence on sub-contracting and sub-contract labour, and skill deficiencies tend to exist in marketing, sales and strategic development, as well as indigenous skills shortages.

Key opportunities exist in the worldwide recycling markets, and the developing mobile crushing market. There is also potential for the development of skills in the sub-contract sector, in order to produce companies with exportable products.

The main threats within the sector are the rise of low-cost economies, together with a rising cost-base.

Our Approach to the Materials Handling Sector

Invest NI's strategy will concentrate on strengthening the companies through reducing costs, increasing value-added products and maximising new market opportunities. In particular, we plan to:

- promote product diversification and innovation;
- promote targeting of new markets;
- encourage best practice manufacturing;
- develop marketing and general management skills in smaller companies;
- reduce reliance of smaller sub-contractors on OEMs;
- encourage sectoral diversification/product development among sub-contractors.

Materials Handling Initiatives

The Materials Handling “Better Business Programme” piloted in 2005, was developed over six workshops to encourage innovation in all areas of business. It included best practice manufacturing principles, and a “wider horizons” visit to a world-class manufacturing company.

Best Practice Manufacturing programme provides the opportunity for the development of best practice among companies. These will be continued during the year to encourage local companies of all sizes to improve manufacturing processes and technologies.

International Initiatives - A sector specific trade mission to India is scheduled for early 2007. Invest NI will also host a Northern Ireland stand at two major international exhibitions in 2007, namely Bauma (Germany) and Hillhead (GB).

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Plastics

The plastics sector is made up of businesses whose operations span a broad range of processing technologies including compounding manufacturers, extrusion, rotational moulding, injection moulding, blown plastic film producers and blow moulding. In 2003-2004 income from the polymer sector in Northern Ireland was £1.1 billion.

Approximately 90 firms operate in this sector employing 6,050 people. These companies serve key sub sectors including aerospace, biomedical, automotive, electrical engineering, construction, telecoms and packaging.

A significant number of international companies who operate in the polymer sector have chosen NI as the location to service their global markets. These include Uponor, Kingspan, Colorite, Canyon and CRH. They are supplemented by a strong group of indigenous business.

Invest NI is actively working with a significant number of these companies supporting them in supplying high value niche export markets. Developments in technology and “global value chains” mean Northern Ireland’s distance from markets is becoming less relevant for polymer sector activities.

Invest NI’s polymer sector team is involved in technology transfer and has strong collaborative links with universities, including:

Queens University - [Polymer Processing Research Centre \(PPRC\)](#)

University of Ulster – [Engineering Composites Research Centre](#)

University of Ulster – [Northern Ireland Bio-Engineering Centre \(NIBEC\)](#)

Invest NI works in partnership with various forums and trade bodies who support and represent the sector. These include Northern Ireland Polymers Association (NIPA) and Intertrade Ireland.

To help the polymer sector achieve sustainable global competitive advantage, Invest NI has identified the following priorities:

- Design and Innovation (including university level research)
- High quality engineering skill base
- Supply chain initiatives
- Development of global markets

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Our approach to the sector

Invest NI works with industry bodies and other key stakeholders to help engineering companies increase their competitiveness and grow their export base. Research and development leading to innovative products is a key focus for the industry.

Business Development Solutions

Invest NI offers an extensive portfolio of advice, assistance and support which can be tailored to meet the needs of companies either in particular sectors, or who are tackling specific challenges within their business. This covers areas such as strategy development, people development, research and development, exporting, energy management and e-business. Full details of our programmes and services are available from the [Business Development Solutions section](#).

Events

See [Invest NI's Event Planner](#) for more events, and see also the [Trade Events Programme](#) for trade missions in your sector.

Industry Links

Engineering Employers Federation	www.eef.org.uk
Northern Ireland Polymer Association (NIPA)	www.nipa.net
DTI Automotive Website	www.dti.gov.uk/sector-automotive
UK Auto Industry	www.autoindustry.co.uk
Society of Motor Manufacturers and Traders Ltd	www.smmt.co.uk
Automated Materials Handling Systems Association	www.amhsa.co.uk
British Materials Handling Federation	www.bmhf.org.uk
Construction Equipment Association	www.coneq.org.uk
Fork Truck Hire Association	www.fork-truck.org.uk
Lifting Equipment Engineers Association	www.leea.co.uk
Materials Handling Industry of America	www.mhia.org
Material Handling Engineers Association	www.mhea.co.uk
The Institute of Quarrying	www.inst-of-quarrying.org

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Useful Information Sources

Quarry Management Journal

www.qmj.co.uk/qm

Monthly journal for the quarrying, asphalt, concrete and recycling industries.

Pit and Quarry

www.pitandquarry.com/pitandquarry

Magazine for aggregates industry.

Forkliftaction.com

www.forkliftaction.com

Online journal for materials handling industry. It has up to date industry news as well as a searchable business directory.

Materials Handling Management

www.mhmonline.com

Online source for materials handling equipment, systems and software manufacturers, consultants, integrators and third-party logistics providers.

Report on the Mechanical Engineering Industry in Eastern Europe

www.ikb.de/content/en/market_reports/2004/mechanical_engineering_04.pdf

This report looks at sector trends, structure and value of the industry in Eastern Europe.

Guides to the market research sources which are available from Invest NI's Business Information Services can be downloaded from the Publications A – Z section of the website (under S for Sector Guides).

Contacts

For more information, contact:

Business Information Services

Invest Northern Ireland

Bedford Square

Belfast

BT2 7ES

T: 028 9069 8135

E: bis@investni.com