

Manufacturing Sector Plan 2014-2020



Executive Summary

Greater Lincolnshire evidences a strong manufacturing and engineering heritage and we are proud of our outstanding position as a nationally important centre for manufacturing. We can trace a long tradition of manufacturing excellence underpinned by a highly skilled and loyal workforce and are home to world class companies.

Manufacturing is one of Greater Lincolnshire Local Enterprise Partnerships (GLLEP) most important sectors based on its contribution to the UK's economy. The sector delivers a direct economic value to the Greater Lincolnshire economy of £3.4 billion per year and employs approximately 57,000 people.

Manufacturing will play a significant part in the future economic growth of the region. The GLLEP will champion the development of infrastructure enhancements and place marketing. Existing business will be supported to develop and grow through access to a skilled labour market, support to innovate and embrace R&D and access new markets and local supply chains.

The quality of life, new and growing universities and colleges with an engineering and technical focus, high quality, science-focused schools, improving road and rail access to markets and supply chains, economically priced land and buildings, all make Greater Lincolnshire a proposition worth considering as a location for companies worldwide interested in investing in manufacturing in the UK. The GLLEP economy continues to improve and grow; demonstrating resilience and now provides sectorial opportunities for innovation and growth.

Historic Legacy

Greater Lincolnshire's manufacturing industry was built on the foundation of natural resources, uncommonly prominent than in most other regions in the UK, namely agriculture and food production.

During the industrial revolution Greater Lincolnshire became the principal provider of food and drink for the UK. The drive for more food led to the much needed mechanisation of farming and food production, this revolution attracted intellectual interest, and created an industry involved with the provision of power for industries way beyond farming and fishing.

Greater Lincolnshire became a key area for the development of all types of steam power traction. This was followed by internal combustion engines, which fuelled the development and manufacture of planes, trains, ships and automobiles. All of this was accelerated by relentless innovation.

Greater Lincolnshire became and remains a 'world class' manufacturing region, fostering a quality reputation, and many of the products produced in the early 20th century can still be found surviving today in industrial strategic locations around the world.

The rich engineering and manufacturing heritage in Greater Lincolnshire has played a part in providing a legacy of sites and skills, which offer investors the opportunity to become a resident in a primary location that already boasts investment from a number of world class businesses.

Sector Overview

Manufacturing plays a major role in the economy of Greater Lincolnshire area contributing £3.4bn (20 per cent of total economic value) and employing approximately 57,000 people (14 per cent of total employment). There have been a number of key growth areas - primarily engineering, wind turbine manufacture, chemicals, metals and polymers.

North Lincolnshire has over twice the national average of people working in the manufacturing sector (20.1% work in manufacturing compared to 9.8% nationally). The manufacturing sector in the GL LEP area has an established history and plays a significant role in the area's economy.

Growth of the sector is a strategic priority. This is because of its importance to the area in terms of employment and value to the economy, and also because of its potential for growth.

The GLLEP region has 2,370 registered businesses operating in the sector (Appendix 1) this includes a large number of small and medium enterprises, many of these were created from 'spin outs' or 'legacy' companies from the original manufacturing industries. These

businesses are participants in many supply chains around the globe, and are growing in number.

The region boasts a range of inward investors who are industrial world class businesses, , i.e. Siemens (Germany), TATA Steel (India), Bifrangi (Italy), Dynex (China), Lincat (America), and is becoming a significant manufacturing location and investment region of the future.

The food sector is also embracing automation rapidly and this has led to increased demand for specialist food manufacturing equipment. Information provided in the GL LEP Agri Food Plan reiterates that agriculture and food engineering is a dispersed and generally fragmented sector with many local small suppliers, maintenance and fabrication businesses and relatively few large employers. Househam Sprayers and Tong Engineering are however both significant local businesses with a national and international client base. Local research suggests 700 jobs are dependent on this sub sector in Lincolnshire.

Nationally the Agricultural Engineers Association estimates the agricultural engineering sector to be worth £4bn, although much of this total relates to major national manufacturers such as JCB and Case New Holland and includes substantial exports. Locally major machinery suppliers such as the Doubleday Group and Chandlers are also significant local employers.

Greater Lincolnshire remains a 'world class' manufacturing region in diverse ways. There is no doubt of the regions farming and food processing credentials, and the petro chemicals activity in the Humber Energy Estuary is linked to many world class players. Other world class manufacturers of note are perhaps less well known, but in their own industries have great standing.

Such examples are:

- Middleby Worldwide, the worlds' leading manufacturer of commercial cooking equipment, based in part in Lincoln (ex Lincat)
- Bifrangi with the western worlds' largest crank shaft press, based in Lincoln
- Great Plains Simba, one the worlds' largest farming equipment manufacturer, based in Sleaford.

Such diversity of investment and readily available land opens up all sorts of possibilities for future manufacturing industries. Offshore wind industry will provide one of the biggest opportunities for potential investment. It is estimated offshore power industry will yield an investment opportunity of £16-£21bn by 2020 in the UK, and could create a £7bn uplift in Gross Value Added (GVA).

On the south bank of the Humber Estuary, the South Humber Gateway is a premier site for renewables development and investment opportunity for the renewables sector, and the largest renewables and logistic park in Europe. With the:

- Last undeveloped deep water estuary in the UK (4miles)
- 12 hours steaming time to Europe – 40 million people / 4 hour drive
- Biggest Combined Heat & Power Plant in Europe
- Largest East Coast RO-RO facility – Humber Sea Terminal / C-Ro
- Europe's largest Renewables and Logistics Parks
- Largest Enterprise zone in the UK
- Centre of £6 billion Humber chemical industry, 2nd largest in the UK
- Energy capital – National Grid 6%
- ABLE Marine Energy Park

The Royal Air force have long been a major contributor to the region's economy, with AWACS main headquarters at Waddington, and the world's best aerobatic jet display team the Red Arrows based at Scampton, not only do we train the best pilots in the world, but we tend to retain the skills of these highly trained personnel after their service terms are concluded, providing a superbly trained pool of labour for future employment in greater Lincolnshire. This is typified with BAE Systems move to Humberside Airport.

Lincolnshire has a central location in the country biased to the east and is well linked with roads, ports and airport facilities, and offers a great standard of living for would be investors.

The relatively low cost of land, buildings and labour rates in Greater Lincolnshire, (major concerns of most existing companies or inward investors), makes it a very competitive place to establish a business.

Greater Lincolnshire's has a strong academic reputation with many excellent schools. Higher and Further Educational establishments are embracing the need to increase provision in STEM (Science, Technology, Engineering, Maths) subjects and the University of Lincoln's School of Engineering and the new University Technical Colleges (UTC) are integral to the growth of the sector. Lincoln UTC, specialising in Science and Engineering, opened in September 2014. It will become a talent pipeline for local and international businesses from a wide range of sectors within Science, Engineering and their related fields. Lincoln UTC's project-led curriculum allows students to learn through context, working with a wide range of industrial partners, providing opportunities for businesses to engage with talented scientists and engineers early in their careers. Using modern facilities and equipment, students will leave Lincoln UTC as work-ready and technically capable young professionals.

The University of Lincoln's Innovation and Science Park will become beacon of support and there are well established links with the engineering faculties at the Universities of Nottingham and Hull.

The quality of life, high ranking universities and colleges with an engineering and technical focus, high quality, science-focused schools, easy access to markets and supply chains, all make Greater Lincolnshire an enticing proposition for companies worldwide. The economy

continues to demonstrate resilience and opportunities for innovation and growth against a backdrop of challenging economic conditions and longer-term globalisation trends.



Figure 1 Manufacturing Sector Infrastructure Map

The GL LEP area already contains an excellent infrastructure provision including transport, Enterprise Zone and skills opportunities – Figure 1.

GL LEP World Class Manufacturing /Engineering

Greater Lincolnshire has a long and distinguished heritage in manufacturing and engineering, with significant concentrations of activity in metals manufacturing (North Lincolnshire), chemicals/ petrochemicals (North and North East Lincolnshire), power /electronic engineering (Lincoln), agricultural engineering (East Lindsey), rubber and plastics (East Lindsey), electrical machinery (Grantham/Stamford) and wood products (Boston).

In more detail, the major manufacturing/engineering sub-sectors in the GLLEP area include:

Power engineering

- Siemens (industrial gas turbines- oil & gas industry) /Turbine Efficiency Group Ltd employs over 2000 people
- Able Marine Energy Park (AMEP) offers 1,389m of new heavy duty deep water quays and 366.7 hectares (906 acres) of developable land. It is designed specifically for the marine renewables sector providing a multi-user facility for the manufacture, storage, assembly and deployment of next generation offshore wind turbines (OWTs) and their associated supply chain(s).

Metals manufacturing

- Accounting for 5,000 jobs
- Focused around Tata Steel in North Lincolnshire

Fabricated metal products

- Employs over 1,400 people concentrated in North Lincolnshire, North East Lincolnshire and West Lindsey

Chemicals and petroleum

- Accounts for almost 5,000 jobs
- Focused around the North and North East Lincolnshire border
- Includes two oil refineries, Phillips 66 Humber and Total Lindsey
- Provides 27% of the UK's refinery capacity and major gas-fired power stations at Killingholme, Brigg and Stallingbrough
- Supports the growth of the cluster and help to meet the UK's wider energy needs

Rubber and plastics

- Accounts for almost 4,000 jobs primarily in East Lindsey and North East Lincolnshire

Wood products

- Accounts for around 2,000 jobs
- Focused around Mesta Wood UK - a major wood importing and processing business in Boston

Machinery and equipment

- More than 2,000 people work in the manufacture of engines and turbines
- Focused on the Siemens UK plant in Lincoln / Able Marine Energy Park

General mechanical engineering

- Employs over 1,500 people with a concentration of jobs in North and North East Lincolnshire and South Kesteven

Electrical machinery

- Manufacture of electric motors, generators and transformers
- Employs almost 1,200 people across Greater Lincolnshire, with the majority based around Grantham and Stamford

Electronics

- Dynex, BGB, Microwave marketing, E2V, are amongst the most well known with approx. 2000 jobs in the GLLEP region, in various locations.

Food and Drink, and packaging manufacturing equipment

- 1000 people across greater Lincolnshire, focus of National Centre for Food Manufacturing located on the Holbeach campus of the University of Lincoln
- Cluster in South Holland focussing on packaging and electromechanical engineering for the food industry

Agricultural equipment manufacturing

- World class agricultural equipment manufacturers, who have embraced the export market; Tong Engineering, Househam Sprayers, Bailey Trailers, Mastenbroek Ltd, Guttridge Ltd, Larrington Trailers
- Approximately 1500 employees, focus group LAMMA.

Composite manufacturing

- Mtag Composites, SHD Composites
- Approximately 200 employees
- Leading Thermoset Prepregs, Phenolic, Epoxy and Polyester fibreglass manufacturers and moulders

Manufacturing Sector Plan Ambitions and Targets

Ambition

The GLLEP's vision is to:-

- **INCREASE** manufacturing employment, output and investment;
- **GROW** existing businesses
- **ATTRACT** inward investment and;
- focus on where the **IMPACTS** will be greatest

Target

The delivery of the plan will double the economic output by 2030. The current GVA figure is £3.4bn (based on 2011 figures). During the timescale of the plan the GVA uplift will have increased by £680,000,000.

Employment as a direct result of the delivery plan will be increased by 3 % e.g. 1,710 new jobs will be created. This target allows for the existing 57,000 jobs to be retained and increased to 58,170.

Manufacturing Sector SWOT

All of the Manufacturing sectors current strengths, weaknesses, opportunities and threats have been summarised in Figure 2, and then covered in more detail over the following pages.

Figure 2: Greater Lincolnshire Manufacturing Sector SWOT

<p>Strengths</p> <ul style="list-style-type: none"> • World class businesses • Excellent local facilities • Enhanced export propensity • A high technology sector, with specialist products and services • Currently strong overseas sales • Diverse customer base, with a growing international focus • Employment levels relatively resilient compared with other manufacturing sectors • International ownership of larger firms • Investment in Skills Infrastructure e.g. Engineering School, UTC's, CATCH, NCFM, Colleges • Legacy of RAF technical skills • Sub sectors have excellent interrelated local supply chains e.g. agricultural manufacturing 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Lack of technical /supervisory skills • Articulation of skill need • Shortage of graduate and intermediate engineering skills in labour market • Low/declining capabilities for machining and assembly • Limited interaction between engineering companies • Low profile of Lincoln as an engineering centre • International ownership of larger firms • Low level of manufacturing research • Lack of investment in mechanisation technology • Access to growth finance
<p>Opportunities</p> <ul style="list-style-type: none"> • Low carbon and energy efficiency agenda • Lincoln Engineering School – training, internships, qualifications, • R&D • University Technical Colleges- Lincoln, Scunthorpe/Grimsby skilled young people • Private Sector Networks - Engineering Breakfast Forum • Opportunities for Local Supply Chain development • Promotion of Greater Lincolnshire , as a place to live and invest • Promotion of the sector and its capabilities • Enhance the career and industry profile 	<p>Threats</p> <ul style="list-style-type: none"> • Internationalisation of suppliers • Increasing international competition • Varying exchange rates • Supplying to politically unstable countries • Ageing workforce

- | | |
|--|--|
| <ul style="list-style-type: none"> Increased number of higher level apprenticeships | |
|--|--|

Strengths

Greater Lincolnshire already has a number of strengths which will help enabling the GLLEP in realising these ambitions not least its location and current infrastructure.

1. Location

Greater Lincolnshire benefits from its proximity to the UK's primary north-south road and rail links, including the A1 and the East Coast Main Line, and from its access to a wide range of destinations through Humberside, Robin Hood, and East Midlands airports.

The Ports of Grimsby and Immingham handle the largest freight tonnage in the UK and provide gateway access to Europe and beyond. This central location allows goods to be delivered to 75% of the UK's population within a four hour transit time.

Alongside easy and improving access to key ports, airports and the strategic road/ rail networks, Greater Lincolnshire is an attractive affordable option for companies wishing to relocate or grow, offering employees a diverse and growing economy; a wide range of affordable and executive housing; low crime rates and highly-rated public services.

2. Infrastructure

The region has invested in high quality infrastructure to optimise its competitiveness as a business location:

2.1 Roads

- Dual carriageway access from the M1, links Teal Park Business Park in Lincoln, delivers good access from the Midlands and north/south arteries into Lincoln and unlocks supply chain and other investment opportunities.
- The A18/A180 link is improving access to the Port of Immingham from the south and removing HGV traffic from residential areas
- A four hour drive from the Humber/Lincoln gives access to 75% of the UK's manufacturing base
- Sites and premises
- With Siemens as anchor tenant, Lincoln's Teal Park is the largest new Employment Park in the East Midlands offering fully serviced development sites with the potential to deliver up to 4,000 jobs in the long-term.
- The Humber has the largest cluster of sites with Enterprise Zone status in England, including the Able Marine Energy Park at Killingholme – recently granted consent by the Government – and the Port of Grimsby Enterprise Zone, both focused on the offshore wind sector.

- Europarc (Grimsby) is a strategic employment site serving North East Lincolnshire affording a wide range of serviced sites and industrial/business premises.
- The Lincoln Think Tank Innovation Centre and the new Boole Technology Centre are part of the Lincoln Science and Innovation Park. They offer of hi-tech, energy efficient offices and workspaces.
- There is ongoing work with developers to simplify and streamline the planning process and to adopt a consistent approach across the Greater Lincolnshire area.

2.2 Ports

- The Port of Grimsby and Immingham manages the largest freight tonnage in the UK – up 5% to over 60m tonnes in 2012, providing UK exporters/importers with unparalleled access to North Europe, Scandinavia, and Baltic markets.
- The Humber is one of the UK's fourth largest passenger ports and the busiest on the east Coast handling just under 1 million passengers a year
- The Port of Immingham is the UK's premier energy port, handling oil and petrochemicals; coal; iron ore; and renewable fuels for industry.
- The Port of Grimsby is at the forefront of the emerging offshore wind sector, attracting major operations and maintenance facilities from Centrica, Dong and EON, and handles over 500,000 vehicles per annum supported by a recent £26m investment in a new terminal facility servicing Volkswagen Group, Toyota, Peugeot Citroen and Suzuki.
- To the south, two smaller “niche” ports in Boston and Sutton Bridge provide a specific focus on cargo such as timber and grain.
- In total the sector employs around 18,000 workers, generating £700million per year
- From Greater Lincolnshire, goods can be delivered to 75% of the UK's population within just a four hour transit time

2.3 Rail

- Much of the freight tonnage handled in Grimsby and Immingham arrives via rail into the rail terminal, which is the busiest in the UK. Around 20m tonnes of oil and 10m tonnes of coal pass through every year.
- The GLLEP Rail Study outcomes will directly feed into this plan

2.4 Digital

- The £50m BDUK superfast broadband programme for Lincolnshire is being rolled out and is one of the largest projects nationally; the £7m Northern Lincolnshire Broadband programme has been supported through BDUK and ERDF.
- On completion in 2015, at least 95% of premises will have broadband coverage.

3. Research & Development and Innovation

There are effective partnerships between Higher Education, Further Education and manufacturing/engineering businesses across Greater Lincolnshire to undertake industry-led research; to commercialise our knowledge/research base; and to provide businesses with the support they need – including investment – to develop innovative new products and services.

The main research and innovation assets include the University of Lincoln School of Engineering; the National Centre for Food Manufacturing; the Humber Seafood Institute; the UTC's in Lincoln, Scunthorpe/Grimsby and the developing Science & Innovation Park (which will develop a major focus on pharmaceuticals and chemical manufacturing). There is strong drive to build local capability which will in turn support business growth.

Small and medium enterprises (SME's) form a large part of the manufacturing sector within the GLLEP region. Yet due to time, financial climate and management constraints SME's have had to reduce or delay their R&D and innovation activities. However there are some excellent examples of small companies working and collaborating with Universities through projects like SUSTAIN Lincolnshire, which hosts manufacturing networks/clusters at the University, and organises knowledge sharing events at exemplar companies or Centres of Excellence.

Existing centres of research and innovation excellence:

University of Lincoln School of Engineering

- Combines state of the art research and high quality learning
- Achieved a reputation for research excellence and its innovative and pro-active approach to engagement with business
- Regularly featured in the media and been highlighted as a success story in education, business and government publications

National Centre for Food Manufacturing

The UK's only national resource to the agri-food business; includes outstanding sector-focused facilities shaped by the industry to include;

- New Product Development Resources
- Sensory Science Courses
- Consultancy
- Research Programmes
- Product Testing and Analysis

Humber Seafood Institute

- Offers high quality chemical, environmental, and microbiological laboratories, refrigeration facilities, and product development kitchens.
- Supports research and product innovation in the food manufacturing sector

Food Refrigeration & Process Engineering Research Centre (FRPERC) – part of the Grimsby Institute Group

- They help all parts of the food industry with any production and process engineering problems they may have
- Experience and knowledge on many aspects of the chilling, freezing, thawing, tempering, refrigerated storage, refrigerated transport, refrigerated retail display, domestic handling and refrigerated storage, cooking, pasteurisation, reheating, decontamination, hygienic processing, robotic handling, automated handling, and cutting of many different foods. Eg. from raw meats, poultry, fish and vegetables to processed ready meals

BG Futures

- The incubator/innovation centre at Lincoln's Bishop Grossteste University.

Sparkhouse

- An award-winning business support centre, situated at the University of Lincoln. Home to creative, innovative and technology based businesses.

Lincoln Think Tank

- Lies within Lincoln Science and Innovation Park offering hi-tech, energy efficient offices and workspaces to new start-ups and incubation businesses.

IOM3/Packaging Society

A centre for materials expertise, with a specific focus on packaging.

4. Education, Skills, and Training

The regions schools continue to buck the national trend with sustained improvements in attainment at both GCSE and A level across Greater Lincolnshire. Our Universities and Further Education Colleges put students at the heart of research-driven, high quality teaching and are at the forefront of engaging businesses in collaborative research and other opportunities.

The University of Lincoln and Siemens have delivered the first purpose-built engineering school for more than 20 years and will open a new Innovation and Science Park in 2015. There are also close links with the engineering faculties at the Universities of Nottingham and Hull. Lincoln and the Humber University Technical Colleges (UTC) will be pivotal in ensuring the 14-18 year old students enrolled are given the academic knowledge, technical skills and work experience to directly contribute to the growing manufacturing sector. The curriculum is employer-led and students are given real-life industry problems to solve which will help them to have the experience and confidence to respond to the skill shortages within the sector. North Lindsey College has also invested £12m in a new Engineering Technology Centre which provides state of the art engineering manufacturing facilities.

The skills infrastructure across the area has developed significantly over the last 10 years, the result of multi-partnership working with employers, schools, and further and higher education providers.

Our schools of excellence are delivering industry technical skills to meet employer needs:

University of Lincoln School of Engineering

- Completed in 2011 it has already achieved a reputation for its innovative and pro-active approach to engagement with business and for research excellence. It will continue to grow our skilled workforce through expansion of the Engineering school. Phase 2 and 3 of the Engineering school are in progress

Centre for Technical Assessment Humber (CATCH)

- Industrial environment combining process plant, workshop and external areas with classrooms, meeting rooms and conference facilities delivering specialist services in partnership with providers

North Lincolnshire Engineering Technology Centre

- Based at North Lindsey College providing training and support in Engineering Manufacturing including CAD, Machining, Prototyping, NDT, Bio Science and material testing laboratories

National Centre for Food Manufacturing (NCFM)

- National Centre for Food Manufacturing is developing our food engineers for the future; shaped by the industry, for the industry

Lincoln University Technical College (UTC)

- Opened in September 2014 and developed in partnership with University of Lincoln, Lincoln College and Siemens, the new Lincoln UTC is the first in Greater Lincolnshire combining vocational education with academic teaching in engineering and science for 14-18 year olds

Humber University Technical College (UTC)

- Based in Scunthorpe this specialist UTC will focus on engineering and renewable industries and is due to open in September 2015.

The Academy Grimsby (TAG)

- Opened in September 2014 offering traditional GCSE education alongside additional specialised pathways in Engineering and Health Care Studies
- From September 2015 offering additional pathway in Creative, Digital & Games

Grimsby Institute Group

- The Grimsby Institute Group has developed a responsive provision that has been designed to help improve skills. The Institute's Nuns Corner Campus is home to the Engineering & Renewable Energy Centre, which houses a fully operational wind turbine, biomass boilers and photovoltaic technology to aid in the training and upskilling of the workforce
- In 2016 the Grimsby Institute will launch a new £7.5million Logistics Hub in North East Lincolnshire offering individual and team training suites and simulators for offshore vessels and portside & offshore lifting

5. Career and Industry Information Provision

It is important that information about the LEP's growth sectors are provided in a useful way to young people, teachers and parents, so that they can make informed choices about their career paths and learning. Perceptions about the manufacturing sector must be challenged so that we can ensure a pipeline of future recruits.

There are a small number of examples currently in place:

- The 'Aspirations' publication that is provided to schools containing stories, case studies and facts about local industry
- Locally targeted 'Have-A-Go' skills events that give young people and unemployed a chance to experience different skills;
- Work across a range of partners to raise awareness of the exciting future job opportunities in our manufacturing sector.
- Lincoln UTC provides regular opportunities for students to explore the range of careers available in science, engineering and related sectors throughout businesses in Greater Lincolnshire. This includes hosting careers events for the public, attended by a range of industrial partners, and bespoke work experience placements

6. Apprentices

Locally appointed Apprentice Champions have been working directly with schools and businesses across all sectors to raise awareness of Apprenticeships so that there is an increase in take-up. They find that there are many businesses that are still not fully aware of what an Apprentice is, or how they go about arranging one.

Engineering has in recent times been seen within the top 10 Apprenticeship frameworks being followed and it is important that after the introduction of the new Apprenticeship standards (which will replace Frameworks) there continues to be adequate employer participation in Apprenticeships. Semta, the Sector Skills Council for engineering and advanced manufacturing technologies, suggests that to fill the skills need of the future at least 20% of engineering businesses should have an Apprentice and they want to see double the number of Level 3 Apprenticeships in the industry by 2016.

Weaknesses

Growth in the manufacturing sector is dependent on a number of factors. Businesses in this sector are reliant on a good quality transport infrastructure for the transport of raw materials and finish products, particularly given the sector's higher propensity for exporting.

Businesses in this sector also often require larger premises and expensive machinery to improve the manufacturing process as technology is developed. Therefore the provision of fit for purpose sites and access to finance are other factors for growth.

The recent Greater Lincolnshire Employer Survey 2014 asked businesses about many of these issues and what they felt were the main barriers to growth in the sector. The following section sets out their responses.

1. Recruitment

Recruitment, particularly of more highly qualified staff, is a problem for the sector. A lower proportion of manufacturing businesses recruited last year compared to average. However where they did recruit they were more likely to be to newly created rather than existing posts, and were more likely to be for professional and skilled technical posts. A third of manufacturers who tried to recruit to professional posts and almost half who tried to recruit to associate professional and technical posts said the posts were hard to fill.

Given the skills shortages at the higher end of the skills spectrum, competition in this area of the labour market for the most qualified people is fierce. Approximately 20 per cent of manufacturing sector employers said a poor county profile is a barrier to growth.

2. Skills

Significant numbers of businesses identified skills gaps in their workforce, particularly at a technical management level. The impact of skills gaps means that companies are often not able to bid for or are losing out on growth opportunities. Particular difficulties were identified in recruiting mid-level technical staff such as production engineers.

Lack of higher level skills in the workforce restricts the ability of businesses to innovate and/or improve their products with the resulting loss of competitive advantage.

SMEs and smaller rural businesses identified the loss of skilled employees to larger organisations once they have been trained as a factor when considering the take up of training opportunities for their workforce.

3. Training

The GLLEP baseline survey 2014 identified that the manufacturing sector respondents found it more difficult than average to provide or source suitable training (53 per cent of manufacturers compared to 46 per cent of all employers). A whole variety of reasons were given for the difficulty. Areas of more concern to manufacturing sector businesses than businesses in general include the content of training courses, the flexibility of the provision, the capacity of businesses to undertake training in house, and the capacity of businesses to manage training for staff.

Interestingly 45 per cent of the manufacturing respondents stated that they access sector specific training and 50 per cent go to private trainers, compared to 31 per cent who use local FE colleges and only 4 per cent universities. The University of Lincoln Engineering School, the National Centre for Food Manufacturing and FE colleges will aim to address some of these skills issues.

4. Capital and Cash Flow

Lack of capital for investment and poor cash flow were ranked highly by manufacturers as barriers to growth, only sitting behind lack of skilled work force in terms of significance.

This is particularly important given the fact that businesses in the manufacturing sector were more likely to borrow for the purposes of business growth than for any other reason. In the case of employers from this sector approximately half of those who sought finance did so for expansion and growth purposes compared to just over a third of all businesses. A further 20 per cent said they needed finance to purchase capital equipment or machinery.

The Greater Lincolnshire Employer Survey 2014 revealed that a fifth of manufacturers in Greater Lincolnshire sought finance within the last year compared to sixteen per cent of all businesses. Of those manufacturers who sought finance 21 per cent experienced difficulty obtaining it.

Where business experienced difficulty obtaining finance they were asked to give the reason for the difficulty. Numerous reasons were stated but by far the highest proportion of businesses said lack of adequate business plans, cited by 39 per cent of manufacturing employers compared to 6 per cent of all businesses. This highlights a clear area where support to businesses in this sector would be beneficial.

However around a third of manufacturing employers rejected the terms of the loan compared to 11 per cent of businesses in general. This suggests financial institutions remain cautious in terms of risk which may be reflected in their loan terms.

5. Supply Chains

Approximately 14 per cent of manufacturing businesses said a poor local supply chain is a barrier to growth compared to 10 per cent of businesses in general. When asked what were the factors that prevented businesses from sourcing locally over 80 per cent of manufacturers said it was simply lack of availability/awareness.

6. Sites and Premises

Many manufacturing businesses are long established within Greater Lincolnshire, with just under half of manufacturing businesses surveyed having been in business for over 20 years. Such long established businesses are likely to have been in the same site for many years as their equipment and premises are very much tailored to requirements. Previous consultations with manufacturing businesses have indicated an issue where a minority of businesses are 'stuck' in ageing premises with lack of capital and/or lack of alternative premises being an issue.

Opportunities

Locally, since the beginning of 2013 results from our own local Quarterly Economic Survey show manufacturing businesses gradually emerging from the recession, posting increasingly strong performance figures in areas such as sales, profitability, turnover and growth in

workforce. It is recognised that there is an alignment of government policies that will support this sector to achieve its growth ambitions (see Appendix 3).

In the Greater Lincolnshire Employer Survey 2014 approximately 70 per cent of manufacturing businesses reported an improvement in financial measures including profitability, market share and turnover during 2013-14, whilst 77 per cent reported they expected a similar improvement over the coming year. Both of these measures were higher for manufacturing than the average for businesses in general.

1. Renewables

Greater Lincolnshire is at the 'shorefront' of the UK offshore wind sector and this will provide GLLEP Manufacturing business with significant opportunities for supply chain businesses in the manufacture and installation of wind turbines and in operations and maintenance activity.

Over the period to 2030 at least 5GW of offshore wind capacity is forecast to be installed in the southern North Sea. The proximity of three major Round 3 offshore wind sites in the southern North Sea creates a significant opportunity to attract large scale investment in wind turbine component manufacturing and pre-installation assembly facilities at the Able Marine Energy Park and other sites in the Humber, with the potential to create up to 3,300 gross direct FTE jobs.

In addition to this there are other significant opportunities in areas including bioenergy and, potentially, in fracking for shale gas.

2. Exporting

Manufacturing/engineering accounts for 42%¹ of Greater Lincolnshire's exports with a particular focus on European and North American markets. Manufacturing exports totalled over £18m in 2009². Moving forward, we need to help businesses to identify new markets to and increase the number of companies with the ability export.

3. Supply Chains

Following the publication of the 'Opportunities for Greater Lincolnshire Supply Chains document' the GLLEP has been working with partners to map the regions existing supply chains. By identifying the major 'up chain' customers and 'down chain' businesses, the GLLEP can focus support on those businesses within the growth sub-sectors that are best placed to take advantage of supplier opportunities, locally, nationally and internationally.

The majority of GLLEP businesses are SMEs with 99.5% employing 10 employees or less. There is, therefore, significant opportunity to strengthen supply chains through clustering activity based on company activity rather than geographic location. Cluster activity can include collaborating to develop new products, skills or markets, and consortia to respond to

¹ LRO Exporting in Lincolnshire July 2013

² Rising to £15m when including miscellaneous manufacturing (LRO as above)

contract opportunities. Current examples include, the innovative, business-led local networks such as the Rural Lincolnshire Skills and Enterprise Hub, based in the Lincolnshire Wolds foster collaboration between small businesses in areas such as technology, innovation and skills investment.

4. Greater Lincolnshire's Quality of Life Offer

Many world class manufacturing business are already located in Greater Lincolnshire, and the region continues to attract international and UK based business visitors and investors, however they are not attracted to our manufacturing expertise alone. The quality of life on offer, the new and expanding universities and colleges with engineering and technical focus, quality schooling, low crime rates and the opportunity to become a supply chain partner of world class companies, all make Greater Lincolnshire an enticing proposition for companies interested in establishing a business location in the Greater Lincolnshire area.

5. Existing Business Support

Manufacturing businesses have stated that they don't know where to access information on the full range of business support services available to them. In response to this the GLLEP has developed an integrated and streamlined web portal approach to enable Greater Lincolnshire businesses to access the range of national and local business support initiatives /advice and grants available across the area, including those delivered by both the public and private sector. The www.businesslincolnshire.com website part of the Business Lincolnshire Growth Hub, covering the County of Lincolnshire provides a gateway for manufacturing businesses seeking support. This also links with the Humber LEP 'Growth Hub' model covering North and North East Lincolnshire <http://hub.humberlep.org> .

Previously businesses have been signposted to the national Manufacturing Advisory Services (MAS) where they can access support to develop business growth strategies, create new products, reduce waste and review supply chains whilst enabling businesses to access grant funding for consultancy support.

The Government have now created the Business Growth Service (BGS) which consolidates 'GrowthAccelerator' and the Manufacturing Advisory Service and schemes from the Intellectual Property Office (IP Audits) and the Design Council (Design Mentoring) into a single service. Export support is provided by UKTI and UKEF. The service is also closely linked to Innovate UK and the British Business Bank.

The BGS is for businesses with the right level of ambition, capability and capacity to improve and grow. Help is available if a business has fewer than 250 employees, is based in England and/or has a turnover under £40m.

Threats

1. Internationalisation of suppliers

- It is recognised that supply chains in the manufacturing sector have been eroding from the point they were at 30 years ago. Even in the UK's most competitive manufacturing sectors, domestic supply chains have weakened in comparison to countries such as France and Germany which maintain a strong domestic supply. As a comparison, the service sector still has domestic supply chain levels of over 90%.

2. Increasing international competition

- The expansion of foreign markets, particularly in Asia, have resulted in increased competition for domestic manufacturers.

3. Varying exchange rates

- Variance in exchange rates can pose significant risk to businesses, particularly those who have numerous transactions outside of the UK.

4. Supplying to politically unstable countries

- Politically unstable countries can have sudden and dramatic policy changes which may result in money being lost by suppliers.

5. An ageing workforce

- The impact of retirement means that attracting younger people into the sector is crucial for its future viability.

Building on Success - Priorities for Action

The development and growth of the manufacturing sector is pivotal to our long-term plans for economic growth. The GLLEP has identified 4 priorities to support the sector in realising its ambitions of **INCREASING** manufacturing employment, output and investment, **GROWING** existing businesses, **ATTRACTING** inward investment and focussing on the greatest **IMPACTS**. These are:

1. BUSINESS GROWTH- through business development and support

- Supporting existing companies to grow
- Access to growth finance
- Access to new and overseas markets
- Local business support, advice and networks
- Local supply chains development and support
- Inward Investment and Investor aftercare

2. SKILLS DEVELOPMENT

- Employer ready
- A skilled and flexible workforce
- Technical/supervisory skills
- Engineering Manufacture skills

3. SUPPORTING RESEARCH & DEVELOPMENT AND INNOVATION

- Unlocking innovation
- Improving access to R&D and developing innovative new products and services

4. INFRASTRUCTURE AND LOCATION

- Transportation, ports, rail, utility & digital infrastructure
- High quality serviced sites and premises
- Place marketing

Each priority area will be discussed in further detail and detailed actions and outcome for each priority have been identified later in the plan.

The manufacturing plan is generic in its proposed objectives and will work across all the embedded sectors in Greater Lincolnshire, and with those considered as targets for future development. (See appendix 2)

Priority 1 - BUSINESS GROWTH through business development and support

i. Supporting Existing Companies to Grow

The GLLEP will develop an integrated package of business advice and support for manufacturing and engineering firms, drawing together expert support services from UK Trade & Investment (UKTI), the Manufacturing Advisory Service, University of Lincoln and other public/private sector providers.

ii. Access to Finance

The GLLEP will continue to lobby for easier access to finance and will access ESIF funding to develop a new financial instrument to provide growth capital in the form of loans, equity investment and mezzanine growth finance. Specific actions include:

- Working with commercial lenders to review trends in bank lending to Greater Lincolnshire businesses, identify barriers to lending (e.g. risk aversion, investment readiness, SME perceptions) and if/how these can be addressed locally
- The provision of support and advice to improve the financial awareness and investment readiness of Greater Lincolnshire businesses.
- The development of new loan/equity investment funds through the 2014-2020 European Structural and Investment (ESIF) Programme which is encouraging LEPs to collaborate to develop new financial instruments as an alternative to conventional grant support.
- Reviewing options to create a long-term, revolving investment fund, drawing on investment from ERDF and legacy funds from Invest to Grow and other schemes.
- Connecting businesses seeking investment with business angels and other investors through establishing new networks which address market failure.

iii. Access to New and Overseas Markets

The GLLEP has been working in partnership with UK Trade and Industry (UKTI) to raise awareness of potential new sectors and export opportunities, develop export plans and support targeted, sector-based trade missions/trade fairs. It has also sought to overcome financial barriers to exporting by signposting manufacturers to support available through UK Export Finance. Further tailored support will be commissioned through the ESIF programme.

iv. Local business support, advice and networks

This plan also supports the continued delivery of the Lincolnshire Investment Network model – a joint local authority/University initiative which provides investment readiness

support for businesses seeking equity investment. It does this through optimising access to grant/loan funding for Greater Lincolnshire businesses including:

- RGF – Regional Growth Fund, including the ‘Growing the Humber’ RGF programme available for businesses in North and North East Lincolnshire and the North Lincolnshire RGF programme
- ERDF – European Regional Development Fund
- RDPE – Rural Development Programme for England
- ESF – European Social Fund
- Invest & Grow Fund
- UK Steel Enterprise investment programme (North & North East Lincolnshire)
- AMSCI (Advance Manufacturing Supply Chain Initiative) Fund
- SUSTAIN Lincolnshire funding (which promotes resource efficiency and reuse of waste within the supply chain)
- Venture Capital Funding Operated through Catapult this fund is for a minimum of £1 million and can support major expansion projects.
- Innovate UK -funding focused on science, research and innovation.
- Grants 4 Growth - Capital grants for SME's to purchase/install efficient new processes, production facilities and clean technology.
- Bank RGF Schemes Individual grants to support growth
- Export guarantees and other support delivered through UK Export Finance

v. Local supply chains development and support

In relation to the potential of renewables within the Greater Lincolnshire area we will investigate the development of a ‘heat cluster’, using energy from the new Energy from Waste plant.

Furthermore, this plan also supports the continued delivery of;

- Local business support and advice delivered through a range of partners including Lincolnshire County Council, North/North East Lincolnshire Council’s and e-factor.
- Sector-focused networks including the Grimsby Renewables Partnership and Lincoln Engineering and Agricultural Forum which enable businesses to share knowledge and commercial opportunities across the supply chain, Lincoln Engineering Breakfast, Gainsborough Manufacturing Network, Rural Lincolnshire Skills and Enterprise Hub etc.
- SUSTAIN Lincolnshire, which promotes resource efficiency and waste recovery and re-use across the supply chain.
- SUPPLY Lincolnshire, which supports businesses procure and trade locally, strengthen their own supply chains, and assist SMEs to assess and increase their business through these supply chains.
- A network of incubators and managed workspace targeting knowledge-based / advanced manufacturing businesses

vi. Inward Investment and Investor aftercare

UKTI's strategy "Britain Open for Business" is at the heart of the UK Government's drive to promote growth through trade and investment. The GLLEP, through Lincolnshire County Council, North Lincolnshire Council and North East Lincolnshire Council, continues to be at the forefront of promoting the GLLEP area, attracting new inward investment from abroad and co-ordinating investor development (aftercare) support across the region.

In order to facilitate growth the GLLEP will seek to enhance current provision through accessing ESIF funding to provide aftercare/investor development support to foreign owned companies and large indigenous companies through an account management approach with the aim of retaining and increasing workforce and/or investment. Support will also include identifying supply chain gaps, developing sector propositions, and gathering market intelligence.

Priority 2 – SKILLS DEVELOPMENT

In order to give manufacturing businesses a competitive edge, the GLLEP needs to ensure that the future workforce is employer ready, and the existing workforce is skilled (Technical/supervisory skills) and flexible. It will do this through:

- Supporting collaboration between industry and the skills providers to ensure a continued focus on delivering world-class research and development activity which has the capacity to benefit all areas of the sector.
- Working with employers and training providers to identify general and more specific skills needs in order that local solutions can be developed to meet these needs
- Targeting the use of ESF funding to look at ways in which SMEs and smaller rural companies can be supported in addressing skills gaps and thus minimise the investment risk for smaller businesses in the take up of skills training.
- Removing the significant barriers to addressing skills gaps including:
 - The lack of locally available training provision
 - The cost of training courses
 - Difficulty in accessing courses which addressed particular or specialist skills areas
- Encouraging employer engagement in apprenticeships and workforce development through a range of measures to de-risk investment in training.
- We will promote the role of the Centre for Technical Assessment Humber (CATCH) in providing world class training facilities to meet the needs of the chemicals, energy and offshore sectors, working with a wide range of industry-leading providers.
- Support the development of Engineering Manufacturing skills to meet the needs of existing employers and inward investors in Greater Lincolnshire

The GLLEP recognises that skills gaps cannot be solved simply by putting on more training. In addition to the work of the GLLEP through the Employment and Skills Board, the sector itself along with the educational establishment need to:

- Ensure that the current workforce is upskilled through training that meets the needs of industry, and to do that, support those employers who are not able to fully articulate their skills needs, and ensure that providers of training at all levels are able to respond to those needs;
- Have a good pipeline of work-ready and suitably qualified labour pool from which to recruit.

As a result of this work and by addressing the likelihood of future shortfall now, the sector should see a significant increase in the pool of skilled local recruits available in the future enabling the region to maintain its competitive advantage and position itself ahead of the game.

Priority 3 - SUPPORTING RESEARCH & DEVELOPMENT AND INNOVATION

Actions

- Further develop the world-class, industry-focused research and development activity at the University of Lincoln School of Engineering alongside an extensive programme of business engagement to facilitate technology transfer and commercialisation of research.
- In order to promote and facilitate innovative practices the role of the National Centre for Food Manufacturing and Humber Seafood Institute need to be further developed to deliver innovation support for businesses across the food manufacturing sector.
- Strengthen links between Greater Lincolnshire's Universities, Colleges and the national network of Catapult Centres (Appendix 4).
- Encourage businesses to utilise the UK High Value Manufacturing Catapult Centres and access their support offers including research, facilities, contacts and funding.
- Embrace the recommendations from the BIS Science and Innovation Plan e.g. R&D tax credits, new Catapult Centres for Energy Systems and Precision Medicine etc.
- Make full use of the Innovate UK services e.g. R&D, Smart, IP, AMSCI funding.
- Through the Enterprise Europe Network (EEN) access the new innovation advisers who will be able to hand hold businesses through innovation processes, accessing Innovate UK funding, IP support etc.
- Expand the network of incubator/managed workspace facilities across Greater Lincolnshire to create the right environment for the growth of innovative businesses
- Develop and approach to Industrial symbiosis, utilising new energy generation and power provision from renewable of all types, biomass in particular and develop recycling and sustainable technologies.

Priority 4 - Location and Infrastructure Actions

The GLLEP will continue to invest in business infrastructure to support the growth of the manufacturing sector by;

Roads

- Continuing to lobby for improved infrastructure where the impact is greatest.
- Focussing on realistic projects which will remove bottlenecks and barriers and improve mobility and growth opportunities including:
- Grantham East West Relief Road
- Spalding Bypass
- Lincoln Eastern Bypass
- East-West link
- Improved access to Humberside Airport from the M180
- Junction improvements to the A180 at Great Coates and other locations to facilitate growth. Developing the South Humber Link Road to improve access to the South Humber Bank from the A1173 and unlock key development sites
- The A160/A180 major road scheme led by Highways England is under construction and will involve upgrading key infrastructure on the A160/A180 and full dualling from Brocklesby interchange (A160) through to the port entrance. Increasing capacity and reliability
- Lobbying for the development of the east coast link road, Boston to Immingham
- Lobbying for partial dualling of the A15 between M180 and Lincoln

Ports

- Securing further investment in port facilities and infrastructure to unlock the growth potential of the Enterprise Zone and other key sites
- Creating an economic development plan for the port of Boston.
- Create the Port of Scunthorpe .

Rail

- Securing rail gauge enhancements from Immingham to the East Coast Main Line at Doncaster to achieve a significant increase in the capacity of the South Humber Main Line
- North Lincolnshire Gauge Enhancements during 2014-17 will be a key piece of infrastructure for the South Humber Bank. This will enable the European standard containers to use the rail system to join the main line at Doncaster and maintain our competitiveness as an international port. It should also encourage more goods to be transported by rail not road and increase multi modal options

- Promote the South Lincolnshire Rail Freight Interchange project, which will create a new International food park and take between 1,500 and 2,000 HGV's a day off the roads whilst creating growth opportunity and new jobs.
- Continuing to lobby Government for improved rail connectivity and for a direct Lincoln to London rail link as a major impacting factor on local businesses and economic growth through opening access to new national markets.
- Lobbying for greater electrification of lines in the GLLEP region.
- Improving accessibility to key employment locations through local service improvements.
- The LEP is a part of the Midlands Connect initiative, looking at major road and rail investment unlocking economic growth. One of the five key strategic transport priorities is the Newark strategic road and rail enhancement scheme which aims to develop a strategic approach to addressing the delivery of major growth in Newark and the interchange between the A1, A17 and A46, including a northern Newark bypass. As well as a grade separation of the East Coast Main Line and Nottingham to Lincoln Line to improve east-west connectivity and journey times for long distance services.
- A GLLEP Rail Strategy is in creation and will impact on the manufacturing sector. This includes the direct Lincoln to London service, and also for North Lincolnshire it means greater connectivity at key stations (ie Doncaster) for connections to London and cities of the North. It also includes electrification, the East Midlands Trains Franchise due to renew in 2017 etc.
- Network Rail - Network Rail are undertaking major resignalling works and upgrades on their lines later this year. This will provide much improvement for our train services (freight and passengers) within the GLLEP area.

Airports

- Lobbying to develop a wider range of scheduled services from Humberside Airport, alongside enhanced surface access.
- Developing new scheduled services to Copenhagen and other European destinations at Humberside Airport and cementing the airport's role as a major hub for oil, gas and offshore wind operations in the southern North Sea
- Humberside International Airport is a key asset for the Greater Lincolnshire area. NLC are working with the train operating companies and Network Rail to improve connections and facilities at Barnetby for those access the airport by rail.
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- HUY has the major scheme funded through the Humber LEP to improve surface access to the Airport, at the Airport entrance, A18 Barnetby Top and Caistor Road (bordering with Lincolnshire). This is an important improvement to encourage and facilitate further growth at the airport
- Developing linkages with Robin Hood (Doncaster) and East Midlands airports.

Digital

- Lobbying for a robust mobile/4G network
- Promoting Superfast broadband to the sector

Sites and Premises

- Maintaining a supply of high-quality, serviced employment sites and premises across Greater Lincolnshire to support the attraction of inward investment and facilitate the expansion of existing businesses
- Maintaining the supply of high quality employment sites in strategic locations
- Exploring new mechanisms to de-risk development sites through up-front investment in site utilities and infrastructure
- Developing the proposal for a 'heat cluster' at the Teal Park location.
- Ensuring promotion of our existing Enterprise Zones (EZ) in North and North East Lincolnshire whilst exploring the potential to develop further EZ-based initiatives in other parts of Greater Lincolnshire
- Develop the proposal for Sandtoft Business Park just off M180 in North Lincolnshire.

Place Marketing

Work with the GLLEP Place Shaping group to;

- Develop a consistent approach to marketing and branding for Greater Lincolnshire's manufacturing and engineering offer
- Increase marketing opportunities and tools and increase activity to promote Greater Lincolnshire
- Lobby where necessary and develop closer relationships with central government.
- Identify and support schemes which will increase investor confidence.
- Facilitate business attendance at Manufacturing exhibitions and conference to showcase the world class offers
- Support strategically linked heritage, historic and leisure projects as appropriate.

CONCLUSION

The sector needs to respond to the demands of constant and rapid change. The focus is to develop a robust platform on which to develop, sustain and grow businesses of international importance. The plan seeks to strengthen the industrial base by targeting activity on producing high levels skills, R&D, Innovation, and supply chain development. This will facilitate the global competitiveness of the sector and attract international investors and increase long term viability.

Overall the plan is to develop and implement a world-class manufacturing strategy that doubles the value of the sector and that delivers;

- A responsive infrastructure for economic growth
- Tailored support for businesses to access dedicated manufacturing business support and growth finance
- Access to support to unlock R&D and innovation

- Increased skill levels - in particular there will be a focus on driving up demand for the knowledge and skills which will subsequently help manufacturing businesses to adapt new technologies and create new products
- Ensuring that the training offer is tailored to meet the needs of this growing sector
- A vibrant sector that provides a positive career option for young people and attracts new businesses and employees into the area
- Supply chain development and support
- Help to open and access new markets

In most cases the majority of the manufacturing sector plan actions are delivered through existing nationally funded programmes, enhancements via the ESIF Opt in/Open Call process, Business Growth Service, UKTI, Innovate UK and the GL LEP Growth Deal infrastructure projects. The skills development objective will be facilitated by the Employment & Skills Board via influencing Skills Funding Agency, ESF and HE/FE, training providers and SEMTA Sector Skills Council. Gaps in delivery will be filled by developing an 'Open Call' through the new ESIF programme and joining up and coordinating existing provision via the Business Lincolnshire Growth Hub.

The GL LEP region offers one of the country's most economic locations to establish and grow a manufacturing business, with a choice of developing attractive locations, improving skills provision and access to business support that will create a new industrial revolution to put the GREAT into GREATER LINCOLNSHIRE.

Manufacturing Sector Plan: Actions and Outcomes

1 Business Growth Activity	Indicative Outcome/Actions	Potential Delivery Agents
<p>Exporting</p> <p>Help the sector to capitalise on existing strengths and embracing exporting opportunities</p> <p>Extend and enhance the package of UKTI export support to Greater Lincolnshire through the 2014-2020 European Structural Investment Funding (ESIF) programme</p>	<ul style="list-style-type: none"> • Ensure that UKTI offer includes a dedicated manufacturing adviser to act as the interface with industry and maximise potential of the sector. • The UKTI offer will be enhanced to provide an Export Taster Programme, Export Readiness Advice, Co Investment Fund, Commercialisation Support & access to Research Advisers to unlock barriers to growth • Connect established Greater Lincolnshire exporters with non-exporting SMEs to share experience and showcase best practice • Work with the Agri/food sector to develop manufacturing equipment in domestic UK businesses and to fully utilise export markets. 	<ul style="list-style-type: none"> • UKTI have procured EMB Ltd to deliver the UKTI service across the East Midlands
<p>Business Growth</p> <p>Work with MAS via the Business Growth Service (BGS) through the 2014-2020 ESIF programme service enhancements to provide tailored support to focus on growth areas, collaboration, opportunity identification, new market development, cluster groups, supply chains, and create an industry based focus groups.</p>	<ul style="list-style-type: none"> • ESIF Funding will enable GL LEP to provide tailored support programmes to ensure that there is an integrated package of business advice and support for manufacturing and engineering firms • The MAS and Growth Accelerator programmes will have dedicated Lincolnshire advisers who are specialists within the Manufacturing sector to act as the interface 	<ul style="list-style-type: none"> • Pera – holds the current contract to deliver Growth Accelerator and the Manufacturing Advisory Service under the Business Growth Service umbrella

Targets will include; businesses assisted, new jobs created and GVA increases.	with industry and maximise potential of the sector.
Ensure businesses have robust strategic and business management skills to assist them to embrace increased growth and productivity. Work with partners across the whole GLLEP area to ensure business support.	<ul style="list-style-type: none"> • Establish a manufacturing industry ‘focus group’ to act as a sounding board and drive the growth agenda • The top 50 Manufacturing businesses (using Growth Accelerator principles) will be analysed to ascertain growth needs, best practice and establish a benchmark for growth - and devise a support package to meet the sectors needs • Work with partners to hold bi annual Manufacturing Summits to ascertain, business needs, promote support offers and maximise industry buy-in • Foster interest in renewable energy technologies to deliver more sustainable business to promote a more circular economy • Work with the University of Lincoln Engineering School, the Business School and the Lincolnshire Leadership & Management Centre to help develop the manufacturing sector business support offer

Technology Transfer, R&D & Innovation		
Collaboration with University of Lincoln through the Engineering School and	<ul style="list-style-type: none"> • Deliver an extensive programme of business engagement to facilitate technology transfer and commercialisation 	<ul style="list-style-type: none"> • The University of Lincoln are seeking to secure funds via the new ESIF funding

<p>Research & Enterprise Development Directorate to access ESIF funds to deliver innovation, R&D support and support to access Innovate UK funding.</p> <p>Work with the School of Engineering to develop networks of businesses to influence the main components of the curriculum; electronics, plastics, metalworking.</p> <p>Work with stakeholders to develop a hub & spoke model of support through the new Lincoln Science & Innovation Park.</p> <p>Work with and promote the BIS Science and Innovation UK High Value Manufacturing Catapult Centres</p> <p>Work with Innovate UK to ensure business are aware of and are supported to access national support e.g. R&D, Smart, IP funding</p> <p>Work with colleges to promote R & D, Innovation and technology transfer amongst students</p>	<ul style="list-style-type: none"> • Develop industry sector networks that collaborate with academia to maximise, innovation, technology transfer, access to funding and the development of new technologies. • Businesses will be supported to access innovate UK funding e.g. Smart, AMSCI • Utilise the well-established Lincoln Engineering Breakfast network as a sounding board/critical friend to ensure support in developed in accordance with industry requirements • Businesses will be aware of the full range of support the University's Science Park can offer • Raise awareness of the R&D Tax Credit • Utilising the Catapult Centre support via research, facilities, contacts and funding 	<ul style="list-style-type: none"> • Innovate UK have secured funding to host the Enterprise Europe Network (EEN) to provide handholding support to business seeking to innovate • Provision through the 7 existing High Value Manufacturing Catapult Centres and the 2 new centres • Local colleges across the GLLEP area.
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Supply Chain Development

Identify opportunities within growth sub-	<ul style="list-style-type: none"> • Countywide roll out of the Supply Lincolnshire programme • LCC initially secured EU funding to undertake supply
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sectors, mapping large enterprises within the GLLEP area, extending to rest of UK and overseas where future export opportunities exist.		
Identify required supplier accreditations and standards required by large enterprises, and build the capacity and capability of manufacturing and engineering businesses.	<ul style="list-style-type: none"> • Develop a targeted programme of supply chain development to connect Greater Lincolnshire businesses with procurement opportunities e.g. Offshore wind sector. • Creation of 'contract' ready suppliers across the supply chain, capable of competing on local, national international level. • Connect Greater Lincolnshire businesses with procurement opportunities within the growth sub-sectors. • Foster interest in supplying to the GLLEP growth sectors such as Renewables/Energy, Health and Care and Agrifood to deliver sustainable economic growth. • Supporting business to access AMSCI (Advanced Manufacturing Supply Chain Initiative) funding 	chain mapping in Lincoln, Boston and East Lindsey. This has been completed, BUT this still needs to be done for 4 remaining districts.
Strengthen collaboration between businesses across the supply chain, including the creation of collaborative clusters		<ul style="list-style-type: none"> • There are no current funding/delivery options, ESIF Funding will have to be accessed to progress this action.
Ensure businesses are informed about local supply chain opportunities		

Access to Finance		
Supporting businesses to access growth funding opportunities	<ul style="list-style-type: none"> • Promoting all the available grants schemes in the UK and Europe. • Working with the sector to ascertain their financial requirements and influence partners to submit funding bids to provide grant support • Lobbying for easier access to finance • Supporting the development of a JEREMIE "Joint European Resources for Micro to Medium Enterprises" - or revolving fund of funds including grants loans and mezzanine growth finance 	<ul style="list-style-type: none"> • Visiting the leading companies within the sector, understanding growth requirements and influencing partners to meet these needs. • Businesses can access this information via the Advice & Grant Finder on the www.businesslincolnshire.c
Promote and showcase Regional Growth Fund programmes that can assist the sector e.g. Lincoln Growth Fund. Greater Lincolnshire Business Capital Growth Fund, Invest to Grow etc.		
Promote loan funds e.g. Invest & Grow		

	<ul style="list-style-type: none"> • Develop new capital funding programmes through EU funds • Invest & Grow funding - £9m revolving loan fund that aims to kick start stalled job creating developments through rapid investments in local infrastructure and tackling site constraints 	<ul style="list-style-type: none"> • om Growth Hub portal • LCC officers are working with the EM LEPs to develop a new Financial Instrument via Emda Legacy Funds, ESIF and EIB • Once the funding has been secured a Fund manager will be procured • Widen the promotion opportunities e.g. Promotion of opportunities via the Invest in North Lincolnshire website. • Collaboration and joint working with overlapping LEPs to develop opportunities for finance across the wider GL area.
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Inward Investment

Provision to support to ensure inward investment and aftercare.	<ul style="list-style-type: none"> • Securing ESIF funds to enhance the current offer and provide aftercare advisers / account manager resource for the GL LEP area 	<ul style="list-style-type: none"> • The UKTI Trade contract (for the next 5 years delivery) is currently out to procurement
Utilise the UKTI Trade match funding to secure ESIF funds to expand current provision and enhance the business support offer e.g.	<ul style="list-style-type: none"> • Identify and promote employment sites for new businesses • Explore other avenues for inward investment support • Widen the promotion opportunities via the 	

<ul style="list-style-type: none"> • Account Management Provision • Identifying supply chain gaps • Developing sector propositions • Gathering market intelligence 	Invest in North Lincolnshire and Business Lincolnshire websites
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2 Skilled Workforce Activity	Indicative Outcomes/Actions	Potential Delivery Sources
Employer Ownership & Collaboration We want to help employers collaborate so that they can drive changes in training, qualifications and curriculums. We will do this by building on existing networks, e.g., Lincoln Engineering Breakfast Network, and the Gainsborough Manufacturing Network, Chamber of Commerce, Rural Lincolnshire Skills and Enterprise Hub, North Lincolnshire Business Network, Northern Lincolnshire Business Expo, North Lincolnshire Employers Forum, and replicating in different geographical areas if appropriate, to ensure that provision is industry led	<ul style="list-style-type: none"> • Early engagement with businesses via the existing networks • Provision that is industry-led and tailored to meet the needs of the manufacturing sector • Regular liaison with Schools, UTC's, Colleges and the University of Lincoln will be undertaken to ensure skills/training provision meets employer needs • Fewer gaps in provision • Continued growth across the sector 	<ul style="list-style-type: none"> • SFA ESF opt-in • ESF open call
Leadership & Management The LEP will work with higher level skills	<ul style="list-style-type: none"> • The Business Growth Service Manufacturing Advisers will work across industry, and with 	<ul style="list-style-type: none"> • ERDF and SFA ESF

and technical providers through our existing training infrastructure (including the Lincolnshire Leadership & Management Centre and the Kingsway Centre), to drive supervisory, management and innovation skills levels through targeted workshops, taster short-courses and CPD.	the Engineering School at UOL, the Business School at UOL, and others (Catch, UTC Lincoln/ Humber, Kingsway Centre) to provide the best fit of appropriate management skills	<ul style="list-style-type: none"> • Growth Deal project alignment eg Grantham College/ Riseholme College •
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Apprenticeships and Workforce Development

Encourage employer engagement in apprenticeships (including higher apprenticeships) and workforce development.

Introduce schemes that help employers articulate their current skills needs, and plan for future skills needs. For example, a Skills Sector Specialist Business Advisors, diagnosing **employers needs to** ensure growth, and linking these with College and training provider existing offers, and developing new offers.

BIS Science and Innovation Plan endorsement of Higher Level Apprenticeship development at level 4-7

Promote BIS S&I Plan for the newly National College for Advanced Manufacturing. Link with the National

- Greater numbers of Apprentices in the industry
- Better job progression within workplaces and across industry
- Higher numbers of employees involved in training
- Future skills needs will be better known and can be shared with schools and FE Colleges so they are better prepared to plan curriculum changes
- Influence the development of a Talent Retention Scheme for the manufacturing industry to retain jobs and skills
- Promote Higher Level Apprenticeships at level 4-7 to provide higher level technical skills for employers
- Skills Funding Agency ESF opt-in, and mainstream funding
- Possibly ERDF
- BIS Science and Innovation Plan activity

College on Wind Energy in the Humber.

Build on innovative schemes such as the Bradbury CAD Academy and Youth Employment Scunthorpe to provide more opportunities for young people in manufacturing.

Work with large employers such as Tata Steel/Siemens to build on their investment in apprenticeships using these schemes to further build capacity in the supply chain.

- Ensure that employers are aware of the full range of training provision locally, regionally and nationally
- Develop partnerships between providers and employers to build capacity in the indigenous population to take advantage of the opportunities offered by inward investment
- Encourage more employers to mentor, coach and provide work experience for young people in manufacturing

Graduates

Increase the employment of graduates, particularly in SMEs. This will be done through consultation with Industry, and the proposed industry focus groups to help ensure that graduates are work ready.

Identify work readiness skills required by graduates/post graduates and put in place skills development courses and support Continue to develop specific events such as Northern Lincolnshire Business Expo, graduate speed networking events, Internships, work experience for graduates, mentoring etc.

Develop more opportunities for 'home grown' graduates to study and work in the

- Awareness raising of the graduate pool and increase the number of graduate industry placements, internships, PhD Students within the sector
- Promote the BIS Science and Innovation Plan commitments e.g. STEM provision, higher level skills for postgraduates
- Utilise employer partnerships to build on schemes such as the Tata Steel Engineering Trainee scheme to develop more work based graduate training opportunities
- DWP or SFA ESF opt-in,
- Or working with relevant organisations to build these into their existing courses
- Colleges, Local Authorities, Universities, UTC's, Training providers, JCP, Businesses

region.

Sector Promotion

The sector must improve its image and promote its dynamic, innovative and cutting-edge nature.

Develop programme to promote specific manufacturing / engineering skills and careers such as production engineering to young people and ensure that appropriate training opportunities are available. This could include work experience placements, teacher visits; open days, hands-on skills experiences etc.

- Increased numbers of young people taking up manufacturing /engineering courses /career choices
- BIS Science and Innovation Plan –nurturing scientific talent, national curriculum changes, GCSE enhancements
- Develop through the ESB
- SFA ESF opt-in
- DWP ESF opt-in

3 Innovation Actions	Indicative Outcomes/Actions	Potential Delivery Agents
Unlocking Innovation / Improving access to R&D	Ensuring business know where to access support for innovation and R&D ;	
Encouraging and supporting business-led innovation /R&D	<ul style="list-style-type: none"> • Development of an Innovation Council • Celebrating and raising awareness about the value of innovation 	<ul style="list-style-type: none"> • University of Lincoln via access ESIF funds • Collaboration with other universities • Colleges
Supporting businesses to access national funding and programmes	<ul style="list-style-type: none"> • Using existing infrastructure as beacons of support e.g. Incubation, Enterprise and Innovation Centres, Lincoln Science and Technology Park, Boole Technology Centre etc. 	
Ensure effective links are forged with the Lincoln Science and Technology Park and		

colleges	<ul style="list-style-type: none"> • Technical support services- 'hands on provision' • Investment readiness support • Facilitate knowledge exchange through University R&D (KTP's & KTN) • Utilising the Catapult Centre support via innovation, research, facilities, contacts and funding. • UK Science and Innovation Plan- ensure businesses understand the full range of support available 	
Promoting the BIS Science and Innovation UK High Manufacturing Catapult Centres and their innovation support offers / National Colleges / UTC		

Utilising current knowledge base infrastructure

Develop effective partnerships between Further and Higher Education and manufacturing businesses to promote industry-led research, to commercialise knowledge/research base and provide businesses with the support they need to develop innovative new products and services

Promotion and awareness raising about the provision via the Business Lincolnshire Growth Hub;

- Lincoln University School of engineering
- National Centre for Food Manufacturing
- Humber CATCH
- Lincolnshire Technology Hubs
- Boole Technology Centre
- Lincoln Science & Innovation Park
- Lincolnshire's Leadership & Management Centre
- Think Tank Innovation Centre
- Eventus Innovation Centre
- Sparkhouse Incubation Centre
- UTC/colleges

- Need to align provision and develop services

Innovation UK

Emphasising Innovation UK support /local

Promotion of Enterprise Europe Network. Host advisers from the network.

- Innovate UK (national provision delivered at a

presence	Delivery of;	local level)
Increasing the capacity to connect and deliver local initiatives	<ul style="list-style-type: none"> • Information and advice on funding e.g. Horizon 2020 • Help to access new markets • Market , IP and regulatory information • Assistance to businesses to access Smart Awards, innovation vouchers, Collaboration R&D Projects etc. • Ensure awareness and facilitate access to the BIS Science and Innovation business support offers e.g. Catalyst Centres, IP review and exploitation 	
Increase awareness and take-up of innovate UK programmes		

4 Infrastructure/Location//Actions	Indicative Outcomes/Actions	Potential Delivery Agents
Infrastructure development		
Investing and improving connectivity between markets by delivering new/improved road, rail, port and airport links.	<ul style="list-style-type: none"> • Maintain a supply of high-quality, serviced employment sites and premises to support the attraction of inward investment and facilitate the expansion of existing businesses 	<ul style="list-style-type: none"> • LCC /NLC
Facilitate high quality employment sites	<ul style="list-style-type: none"> • Development of road infrastructure e.g. Grantham Southern Relief Road, East/West Link Road 	<ul style="list-style-type: none"> • Buckminster Estates (King 21)
Ready supply of modern, flexible commercial properties	<ul style="list-style-type: none"> • A160/A180 major road scheme led by Highways England • Gauge Enhancements 	<ul style="list-style-type: none"> • Croftmarsh (Skegness)
Promote the fact that airports, motorways and logistics hubs are all within an hour's	<ul style="list-style-type: none"> • Lincoln, Peppermint Junction Holbeach / A52 • Skegness Countryside Business Park, A18 / 	<ul style="list-style-type: none"> • NKDC / Taylor Lindsey Developments

travel time of the region's main manufacturing centres	<p>A180 link/ Spalding Rail Freight Interchange (private sector led) 100-150 acres)</p> <p>Opportunities for leasing or purchasing land or commercial space. Development land for B8 and manufacturing use of approx. 80 acres for lease or purchase. This would provide opportunities for the development of units of between 25,000 sq. feet and 300,000 sq. feetHUY has the major scheme funded through the Humber LEP to improve surface access to the Airport, at the Airport entrance, A18 Barnetby Top and Caistor Road (bordering with Lincolnshire). This is an important improvement to encourage and facilitate further growth at the airportABLE Humber Port (AHP) is situated on the South bank of the Humber Estuary, East Coast of the UK, which in recent years has been the UK's fastest growing port and logistics centre. It consists of ABLE Marine Energy Park (AMEP) and ABLE Logistics Park (ALP) and is Europe's largest new port development providing an exciting proposal for the burgeoning marine renewable energy sector and a variety of port centric logistics functions.</p> <ul style="list-style-type: none"> • Link to the Greater Lincolnshire LEP Rail Study • Continued lobbying for improved rail connectivity e.g. Lincoln to London rail link 	<ul style="list-style-type: none"> • NE Lincs / NL Councils • This will feed into the GLLEP Place Shaping Group
Ensure businesses fully utilise digital connectivity /broadband infrastructure		
Place Marketing – raising the Regions profile with key stakeholders		

- Collaboration with the private sector to develop new sites e.g. King 31 Grantham (serviced land), Skegness Business Park
- Teal Park fully serviced development site – light industrial unit developments
- North & North East Lincolnshire Enterprise Zones – the proximity of 3 offshore wind sites in the southern North Sea creates a significant opportunity to attract large scale investments.
- Other sites to be identified through the local plan process
- Promote super and ultrafast broadband connectivity
- Lobby government for a robust mobile / 4G network
- Development of a consistent approach to marketing and promoting the full range of Manufacturing offers
- Identify and support schemes to increase investor confidence
- Lobby and develop closer relationship with the government

- Facilitate business attendance at Manufacturing exhibitions and conferences to showcase the world class offers

Appendix 1 – MANUFACTURING SECTOR BUSINESS PROFILE

UK Business Counts - Local units

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area type	local enterprise partnerships (as of January 2013)
area name	Greater Lincolnshire
employment sizeband	Total
legal status	Total
Industry	2014
10 : Manufacture of food products	245
11 : Manufacture of beverages	20
12 : Manufacture of tobacco products	0
13 : Manufacture of textiles	60
14 : Manufacture of wearing apparel	25
15 : Manufacture of leather and related products	5
16 : Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	170
17 : Manufacture of paper and paper products	45
18 : Printing and reproduction of recorded media	145
19 : Manufacture of coke and refined petroleum products	10
20 : Manufacture of chemicals and chemical products	65
21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations	0
22 : Manufacture of rubber and plastic products	135
23 : Manufacture of other non-metallic mineral products	95
24 : Manufacture of basic metals	25
25 : Manufacture of fabricated metal products, except machinery and equipment	460
26 : Manufacture of computer, electronic and optical products	55
27 : Manufacture of electrical equipment	50

28 : Manufacture of machinery and equipment n.e.c.	165
29 : Manufacture of motor vehicles, trailers and semi-trailers	55
30 : Manufacture of other transport equipment	35
31 : Manufacture of furniture	80
32 : Other manufacturing	130
33 : Repair and installation of machinery and equipment	295
Column Total	2,370

Figures may differ by small amounts from those published in ONS outputs due to the application of a different rounding methodology.

Appendix 2 : GLLEP MANUFACTURING SECTORS IDENTIFIED

- Steel production
- Petro chemicals
- Food and drink manufacturing equipment
- Packaging equipment
- Farming equipment
- Electronics
- Plastics, composites and rubber
- Metal manufacturing, fabrication, forging, casting, machining.
- Motorsport
- Engine manufacturing-turbines
- Alternative energy production.

Appendix 3 - POLICY ALIGNMENT

Government Growth Plan	BIS Industrial Strategy	ERDF 2014-20
Encourage investment & exports	Importance of supply chain	Enhancing SME Competitiveness
Advanced Manufacturing Growth	Supporting Advanced Manufacturing (AMSCI)	Enhancing SME Competitiveness
Support for green energy	Enabling Sectors	Low carbon/ wind
Supporting Innovation	High value opportunities/ R&D	Innovation
Space Industry	Supporting aerospace competitiveness	Enhancing SME components
Supporting life sciences & healthcare	Identifying areas of greatest success	Innovation
Apprenticeships/ UTC/ Work programme	Support knowledge intensive industry	Education, skills, lifelong learning
Long term view of infrastructure	Increased ICT, improved logistics	Promoting sustainable transport
Capital investment	Enabling sectors and transport infrastructure	ICT/ Sustainable transport
£100m tourist campaign	Long term growth/ planning changes	Protecting the environment
Science and Innovation Plan		

Appendix 4 – UK HIGH VALUE MANUFACTURING CATAPULT CENTRES

HIGH VALUE MANUFACTURING CATAPULT(HVMC)

Advanced Forming Research Centre
University of Strathclyde
85 Inchinnan Drive
Inchinnan
Renfrew PA4 9LJ
SCOTLAND
Tel: 0141 534 5200
www.catapult.org.uk/manufacturing

ADVANCED MANUFACTURING RESEARCH CENTRE

AMRC with Boeing
Advanced Manufacturing Park
Wallis Way
Catcliffe
Rotherham S60 5TZ
Tel: 0114 222 1747
www.amrc.co.uk

THE CENTRE FOR PROCESS INNOVATION (CPI)

CPI Head Office
Wilton Centre
Wilton, Redcar
TS10 4RF

Tel; +44(0)1642 455 340

E: Info@uk-cpi.com

www.uk-cpi.com

THE MANUFACTURING TECHNOLOGY CENTRE(MTC)

MTC Limited

Ansty Business Park

Coventry

CV22 2TF

Tel: +44(0)7772 593 004

www.the-mtc.org

THE NATIONAL COMPOSITES CENTRE(NCC)

National Composites Centre

Bristol and Bath Science Park

Feynman Way Central

Emerson Green

Bristol

BS16 7FS

Tel: 0117 3707 600

E: info@nccuk.com

www.nccuk.com

NUCLEAR ADVANCED MANUFACTURING RESEARCH CENTRE

Nuclear AMRC

University of Sheffield

Advanced Manufacturing Park

Brunel Way

Catcliffe
Rotherham
S60 5WG
Tel: 0114 222 9900
E: enquiries@namrc.co.uk
www.namrc.co.uk

WMG CENTRE HVM CATAPULT

The Oracle Building
Blythe Valley Business Park
Shirley
Solihull B90 8AD
Tel: 0121 506 9780
www.wmghvmcatapult.org.uk

BIS Science and Innovation Plan (Launched Dec 2014) proposes the development of two new Catapult Centres;

- **Energy Systems**
- **Precision Medicine**

TESTIMONIALS

“We have specialist requirements for very highly skilled fabricators, machinists and other craftsmen. We’ve always found the local people to have very good skills and experience.”

Pilbeam Racing Design Ltd

'I am really pleased I did an apprenticeship. It is a fantastic alternative to full time college. I was tired of sitting behind a school desk, I wanted to continue learning but get work experience and to use my hands. For me agriculture engineering was the best one to choose as I was doing a job I love and have grown up with. The Apprenticeship has vastly boosted my skills. I am so much better at working as a team, working to and meeting deadlines etc. I am much more confident now. My aim is to continue as I have learnt new skills and progress my career in engineering in the future.'

James Chantry

"The Lincoln Engineering Breakfast meetings are an opportunity for local engineering sector companies to come together to network, and above all create a strong infrastructure for success. By acting together shared opportunities arise."

Chair of Engineering Breakfast Group

"With the recent opening on the Engineering School at the University of Lincoln we have had access to R&D development through the School locally on our doorstep. This has had significant benefits including; Easy co-location and co-operation of teams; University research can be carried out on real live hardware; Focus on time to market of hardware rather than publication of papers; & alignment of research methods for ease of approval and introduction"

Siemens