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Manufacturing and Engineering

Annual Report 2019/20

Supported by

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Key findings

What the financial data tells us:

Revenue has grown year on year although growth decreased

4.11% 2018

11.22% 2017

Growth in Net Assets risen from **9.97bn** 2017 to

£10.49bn 2018

looking at 2019 businesses are holding onto stock as a result of Brexit

Borrowing down

58%

Highest Revenue Growth for sectors in 2018

13.14%

7.68%

7.57%

6.61%

Largest decline in Revenue Growth for sectors

13.33% 2017

-10.39% 2018

14.54% 2017

6.16% 2018

Key findings

What our clients said:

Post Brexit trading

61% have a Brexit strategy in place

39% feel they cannot plan until they know more regarding Brexit negotiations.

82% of Manufacturing & Engineering businesses have evaluated risk in their supply chain.

Barriers to growth

26% cited global economic conditions.

22% stated recruiting skilled staff.

19% had concerns around Brexit and future trading tariffs.

34% expect to see growth of 1-5% in the next 12 months.

64% invest up to 8% on R&D.

55% In 2019 55% made successful R&D claims.

Future business strategy for 4.0 and Robotic Process Automation

29% have a strategy.

26% stated it wasn't practical due to lack of infrastructure (e.g. lack of 5G technology).

13% stated a lack of financial backing to invest.

68% said they have measures in place to reduce their Environmental Impact in the future.

Employment

78% have difficulty recruiting appropriately skilled staff.

55% Investing in training of current staff to combat recruitment issues.

48% Excluding apprentices, 48% of businesses anticipated taking on new staff.

Dave Atkinson
Head of Manufacturing, SME, Commercial Banking, Lloyds Bank

Chris Barlow
Head of the Manufacturing Group, MHA

I am delighted that Lloyds Bank is once again sponsoring the annual MHA Manufacturing and Engineering report, in conjunction with the Institution of Mechanical Engineers (IMechE).

This report provides a valuable insight into the challenges and opportunities faced by the sector, and our sponsorship helps the continuing development of our understanding of the sector and how we can best support UK manufacturers, particularly post-Brexit.

Manufacturing is of course integral to the success of the UK economy, which is why I am encouraged to see that many manufacturers continue to deliver growth and demonstrate resilience, despite the ongoing uncertainty in the operating environment. However, the sector's skills shortage remains one of its biggest challenges and one that it is working hard to overcome. That's why we are committed to our sponsorship of the Advanced Manufacturing Training Centre (AMTC), which will train and upskill 3,500 engineers, graduates and apprentices by 2024. Given the importance of accessing the right skills to unlock greater productivity, we have also partnered with Be the Business to support their aims of helping British businesses share best practice, compete and grow to help address the UK's productivity challenge.

I hope you find this year's report informative and insightful and my thanks to both the MHA Group and iMechE.

We sit at the cusp of new dawn in the relationship between the United Kingdom and the European Union.

What transpires from this point will, of course be pivotal to the future of the vital Manufacturing and Engineering sectors. It may be that with the transitional period the direct impact will not be seen immediately and with many trade deals still to be negotiated we are still in for a period of some uncertainty. Our Manufacturing and Engineering sector is resilient and adapts to any particular situation but as advocates for the sector we will continue to push their agenda into Government.

This seventh annual MHA Manufacturing and Engineering Report has enlarged its scope this year, thanks to our Data Analytics team, to bring in information filed at Companies House and has compared this to the responses provided by our respondents. It is not surprising that Brexit has impacted significantly on the sector, but the influence of the wider economy is also evident. Skills has been the almost perennial issue highlighted over the years of our reports and this is evident once more, but again, within the sector and despite the challenges it has faced, cash reserves have been boosted, confidence remains high and recruitment plans are in place to take advantage of the many opportunities which exist. I continue to be grateful for the ongoing support of Lloyds Banking Group and IMechE and for our expert contributors who have written within this report.

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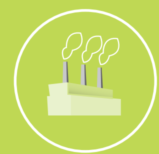
Our MHA Manufacturing & Engineering Survey Report, now in its seventh year, is a go-to report when it comes to understanding the sector, its opportunities and challenges. We benchmark SMEs across the UK to paint a national picture of the Manufacturing and Engineering sector.

To broaden the content of this report, and make it more useful as a benchmarking exercise we have changed our methodology to both a qualitative and quantitative approach. In addition to collecting responses to our survey, we will be comparing this to in-depth quantitative analysis which has been done in conjunction with our Data Insights team.*

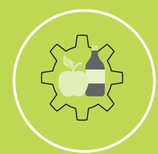
Sample:
We have identified over 1,000 companies that met our search criteria, subdividing them into the following categories: **'Other Manufacturing'** being further subdivided into its **main activities:**



All other manufacturing - raw materials

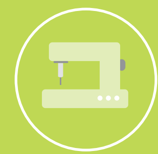
Coke, petroleum, chemicals, and pharmaceuticals

Computer, electronic and light electrical



Food, drink and tobacco

Machinery, vehicle and transport



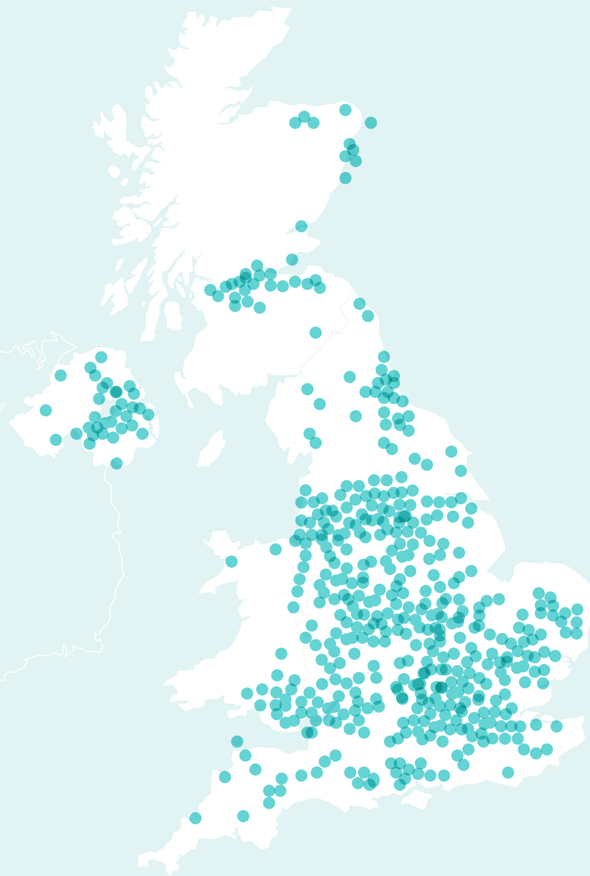
Textiles and leather

* full methodology on page 21

Size and percentage of the businesses

T/O	Percentage
0-10M	33%
10-25M	38%
25-50M	25%
50-200M	4%

The location of sample companies are a broad spread across the UK.



Profit and Loss

Over the past four years there are some key trends which stand out.

	2016	2017	2018
Revenue Growth	6.11%	11.22%	4.11%
GP%	22.15%	21.67%	21.40%
NP%	6.95%	6.78%	6.03%
EBITDA%	10.82%	10.01%	9.41%
Tax Rate	17.67%	16.90%	17.02%
Employee Growth	6.12%	5.10%	2.04%
EBITDA per Employee	27.0K	26.5K	25.4K

Key highlights:

- Revenue has grown year on year, although 2017 growth rates (11.2%) were higher than 2018 (4.1%).
- As a revenue subsection, companies involved in the manufacture of machinery, motor and transport saw a decline in revenue between 2017 and 2018, falling from third to fourth in the hierarchy behind the growing revenues in the manufacture of coke, petroleum, chemicals and pharmaceuticals. All other subsections increased revenue.
- Although gross profit has increased in sterling terms, it has fallen in % terms from 22.1% to 21.4% between 2016 and 2018.
- This reduction in GP% margin has contributed to falling net profit (6.95% to 6.03%) and EBITDA (earnings before interest, tax, depreciation and amortisation) (10.8% to 9.4%) margins over the same period.
- EBITDA per employee fell from £27k in 2016 to £25.4k in 2018. Although expected by some this has not been business as usual for the manufacturing sector. In fact initially we had a period in which manufacturing did better than much of the rest of the economy due partly to Brexit, more recently it has fared particularly poorly.

The analysis indicates that an average manufacturing business through the start of 2019 would feel like they are working harder for marginally less returns.

The picture is not so clear from a Brexit perspective. Since the referendum mid-2016, all profit margin measures have contracted, However, in the year following the referendum (2017), revenue increased significantly higher than the previous and following years.

The big picture for UK Manufacturing over the past few years is that we had a period during 2017 when it outperformed the economy as a whole, then in 2018 and 2019 it slowed sharply and underperformed. In 2017 growth was boosted by the big competiveness gain from sterling's depreciation and by an acceleration in global activity. In 2018 the sterling boost began to fade and also global growth slowed. One key cause of the latter is the impact of international trade tensions particular between the US and China.

Fears of this seems to have hit business confidence and so led to a slowdown in business investment and hence in the demand for capital goods. This brought about a global slump in manufacturing. One recent piece of good news is that a partial trade deal seems to been agreed between the US and China signed on 15th January. This holds out hopes that 2020 may be a better year for global manufacturing.

In the UK, investment intentions have additionally been hit by Brexit slowdown so here the slump has been particularly marked.

Rhys Herbert
Lloyds Bank Commercial Banking

The 2019 General Election result, with the Conservatives winning an overall majority and a swathe of seats across the North of England, may boost certain manufacturing sectors in the coming years. In January 2020, the Chancellor of the Exchequer Sajid Javid indicated that he wants to 'level up' the productivity of the rest of the country with South East England. Up to £80 billion will be made available to spend on infrastructure projects.

Matt Rooney
Institution of Mechanical Engineers

Revenue has grown year on year, although 2018 growth rates were

4.11%

lower than 2017

11.22%

As a revenue subsection, companies involved in the manufacture of machinery, motor and transport saw a decline in revenue between 2017 and 2018

EBITDA per employee fell from

£27k

in 2016 to

£25.4k

in 2018.

Sector Breakdown

4.11% revenue growth on average.

2018

Revenue Growth	4.49%	6.61%	7.57%	13.14%	-10.39%	7.68%
Employee Growth	1.89%	5.54%	2.11%	-1.87%	3.91%	7.10%

All other manufacturing – raw materials

All other manufacturing captures a large number of smaller subsections, grouped by the SIC code system to reduce the number of company categories and also by their likeness. They are mainly involved in working with a variety of raw materials like plastics and metals.

Given the diverse nature of the companies in this sector, it is perhaps not surprising that the group is very similar to the overall average with relation to revenue growth.

Coke, petroleum, chemical and pharmaceuticals

After two years of high growth, this sector saw a slowdown in revenue growth in 2018. The oil and gas price bottomed out in 2016, although given the nature of long-term contracts in this sector the impact of market change is often delayed. It was not until the 2017 financial year that businesses halted recruitment and actually reduced headcount (minus 0.04%) ahead of 2018 when the revenue growth levels slowed significantly, dropping from 14.94% in 2017 to 6.16% in 2018.

There is evidence that the oil and gas market is making a strong recovery, although it will not be until 2020 and 2021 we see that reflected in performance results for this supporting sector. Levels of confidence in 2018 are visible by the increase in headcount once again up to 5.54%.

Textiles and leather

The textiles and leather sector had fairly consistent growth rates although Gross Project is declining. Net Profit as a percentage has remained consistent, suggesting the sector has controlled overhead spend to maintain profit levels. This has not been through cutting headcount however as the EBITDA per employee has reduced. In a sector with growing revenue, this would suggest that the level of new recruitment is higher than the growth in revenue.

Computer, electronic and light electrical

Computer, Electronic and Light Electrical manufacturers experienced a more consistent, and slightly higher, growth in revenue over the last three years compared to the overall sector, although the increased spike in 2017 (9.88%) was not as significant as machinery and coke (14.94%).

The stability of revenue growth is also matched by fairly consistent margin levels across the last 3 years with only slight decreases in net profit.

This subsection generates a slightly higher level of net profit than the sector average (7.93% vs 6.03%), but interestingly has a much lower level of EBITDA per employee. This suggests that this subsection is more labour intensive and less capital intensive than the other subsections.

Food, drink and tobacco

After a very flat 2016, revenue growth was high in 2017 (11.87%) and 2018 (13.14%). Margins in this sector are lean, with efficiency and cost management being a critical success factor.

GP percentage is much lower at 14.95% (vs average of 21.4%) and has seen a declining trend since 2016. Tax rates are much closer to the standard corporation tax rate, suggesting not as many reliefs are applicable to this sector. EBITDA per employee (18.4K) is lower than average (25.4K), indicating this sector is labour intensive.

Machinery, vehicle and transport

Companies involved in the manufacture of machinery, vehicle and transport saw a decline in revenue from 13.33% in 2017 to -10.39% in 2018.

The sector has had a consistent NP% which demonstrates businesses have reacted well to decline in revenue in 2018, reducing overheads accordingly to defend profitability.

Corporation tax

The corporation tax rate reduced with effect from 1 April 2017 from 20% to 19%. As the companies included in the dataset will all have reported under either IFRS or FRS102, the tax charges reported will be "total tax charges" made up of both current tax and deferred tax and so would be expected to be at 19% (or 20%).

However, the factors which typically would have resulted in tax charges of less than 19% (or 20%) would typically be (1) permanent differences such as Research & Development tax reliefs or Patent Box, which reduce current tax without an impact on deferred tax (2) the recognition of deferred tax at 17% which was the corporation tax rate which was expected to be in force with effect from 1 April 2020.

However, the new Conservative Government is expected to either scrap or delay the reduction of the corporation tax rate from 19% to 17%, and therefore we will expect the in both 2019 and 2020 to remain similar to those reported in 2017 and 2018. HMRC's corporation tax statistics commentary shows that the average "cash tax" rate in the manufacturing sector is approximately 10% with the balance of the tax rate to the average charge of approximately 17% being made up of deferred tax movements. This can be explained by HMRC's corporation tax statistics which show that the manufacturing sector is the biggest beneficiary of capital allowances (however relief in the form of capital allowances has a deferred tax impact and so typically will not cause a reduction in a tax rate under a total tax charge).

Tax reliefs

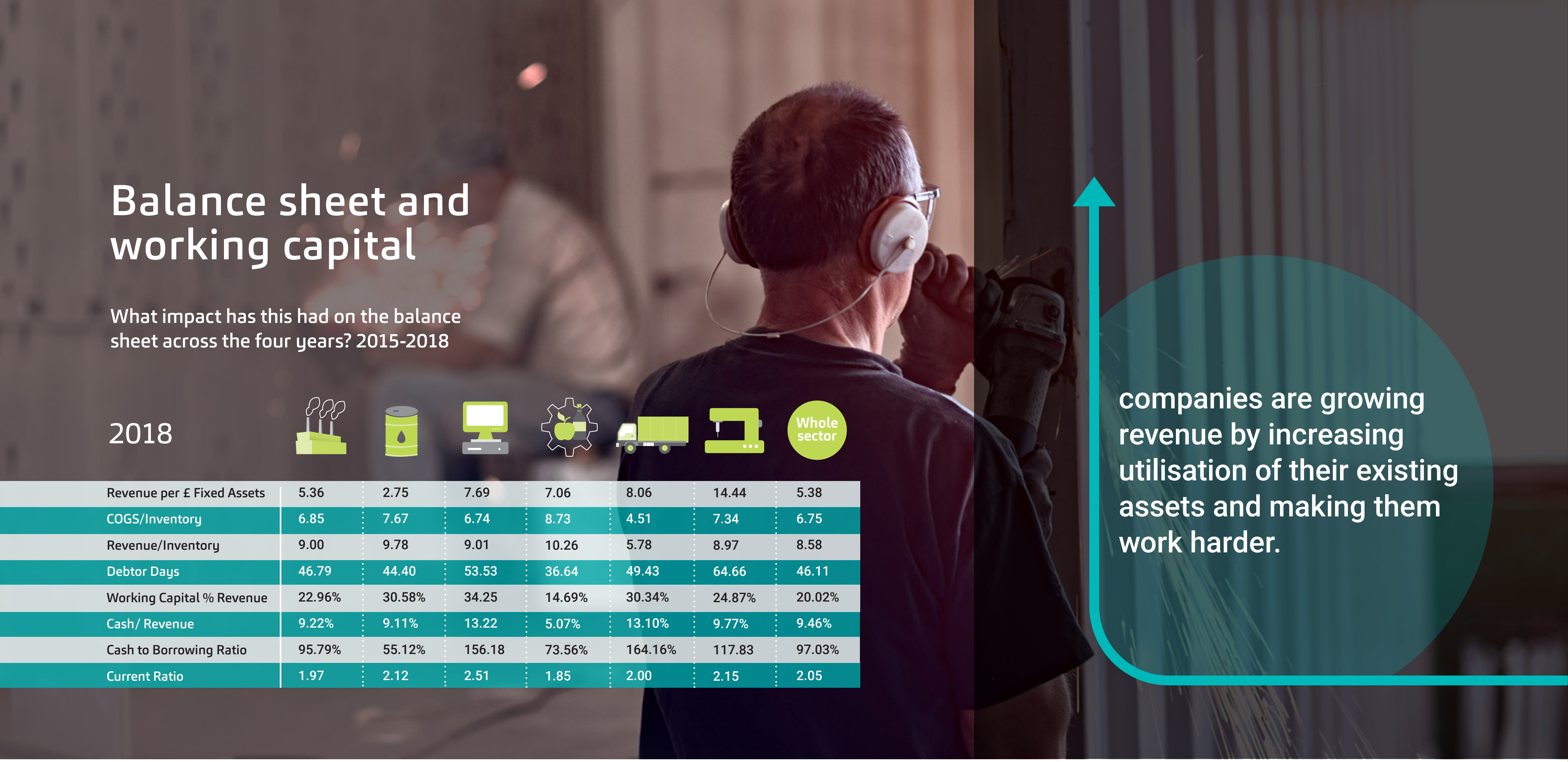
Tax rates are close to the standard corporation tax rate, as would be expected with a "total tax charge" as calculated under IFRS or FRS102. However, HMRC's corporation tax statistics for the manufacturing sector show that the "cash tax" paid by the sector (ie actual corporation tax paid in the manufacturing sector divided by total profits for the manufacturing sector) are approximately 10%. This is one of the lowest average "cash tax" rates across the 18 major business sectors that HMRC report upon. This can be explained by the fact that manufacturers typically benefit from a range of sector focussed tax reliefs such as: R&D, Patent Box and Capital Allowances.

> Decarbonisation of the Oil and Gas sector will be required if the UK is to meet its ambitious targets under the Climate Change Act. Although this industry may be somewhat under threat from the need to phase out their main source of revenue, opportunities also exist in areas like alternative fuels and carbon capture and storage. For example, the Acorn project in Scotland aims to produce hydrogen from natural gas while capturing the associated carbon dioxide emissions. They will then use existing North Sea pipeline infrastructure to transport and permanently sequester the CO2 in a former oil and gas reservoir.

Matt Rooney
Institution of Mechanical Engineers

> It is certainly the case that productivity growth has been weak for some time. This again is not just a UK phenomenon but is worldwide. However, the UK has seen one of the most pronounced slowdowns. Brexit may have had an impact of late as it has discouraged firms from investing in productivity boosting machinery. However, the productivity slowdown predates any talk of Brexit.

Rhys Herbert
Lloyds Bank Commercial Banking



Balance sheet and working capital

What impact has this had on the balance sheet across the four years? 2015-2018

2018

							Whole sector
Revenue per £ Fixed Assets	5.36	2.75	7.69	7.06	8.06	14.44	5.38
COGS/Inventory	6.85	7.67	6.74	8.73	4.51	7.34	6.75
Revenue/Inventory	9.00	9.78	9.01	10.26	5.78	8.97	8.58
Debtor Days	46.79	44.40	53.53	36.64	49.43	64.66	46.11
Working Capital % Revenue	22.96%	30.58%	34.25	14.69%	30.34%	24.87%	20.02%
Cash/ Revenue	9.22%	9.11%	13.22	5.07%	13.10%	9.77%	9.46%
Cash to Borrowing Ratio	95.79%	55.12%	156.18	73.56%	164.16%	117.83	97.03%
Current Ratio	1.97	2.12	2.51	1.85	2.00	2.15	2.05

companies are growing revenue by increasing utilisation of their existing assets and making them work harder.

After depreciation, fixed assets grew by 13.4% in financial year 2016, but this rate of investment slowed in 2017 to 5.2% and further reduced to 2.9% in 2018.

The increase in revenue and continued profitability demonstrated in the data is reflected by the growth in net assets. This has risen from £9.97bn in 2017 to £10.49bn in 2018. From this we can draw that companies are growing revenue by increasing utilisation of their existing assets and making them work harder.

Inventory levels were fairly well controlled in 2016 and 2017, with an increase in inventory levels and a reduction in the Cost of Goods Sold (COGS)/Inventory and Revenue/ Inventory ratios in 2018, as demonstrated in the table (above). The increase in 2018 being noticeably ahead of the previous years, double the percentage increase of the previous year, 2016 £2.43bn, 2017 £2.66bn (increase of 9.5%) and £3.15bn (increase of 18.42%) in 2018.

There is certainly evidence that companies raised inventory in 2019 due to Brexit uncertainty. Our clients surveyed commented that there was growing uncertainty in the supply chain as we approch Brexit, reflected by an increase in the levels of inventory businesses are holding.

Debtors days have fallen in the period alongside an improvement in working capital and the cash to borrowings ratio. Throughout the four-year period, borrowings have exceeded cash levels, although since 2017, the deficit has reduced at a much quicker rate than previously. In 2016 the deficit was 0.28 reducing by 42%, 2017 it was 0.19 with a reduction of 32% and in 2018 the deficit was 0.8 reducing by 58% on the previous year. Businesses are increasingly protecting cash, controlling debtors and either reducing the dependency on loans [or the availability of loans is reducing]. This is further supported by an improvement in the Current Ratio.

Overall, revenue is increasing, but due to a tightening of margins and reducing profitability, businesses appear to be less likely to invest.

Case study:
Flexible Machining Systems (FMS)

FMS is a precision engineering company, hoping to expand its business outside of the UK within the next couple of years. It has a loyal customer base owing to its excellent reputation for quality. However, it had lacked investment over several years until recently, when FMS and its sister company, Horsham Sheet Metal (HSM) (who were both part of a larger business group), were purchased. FMS' new owner is now investing in new machines, equipment, people and processes. Its new robust production planning and project management processes have had a positive impact on the business, making sure orders and special projects are executed on time. This has been aided by the addition of six new people, including three apprentices, a quality/continuous improvement manager and production engineers. Russell Levell, FMS and HSM managing director, believes the Government should promote the Manufacturing industry as an exciting career choice more effectively, as many school leavers have the perception that it's a 'dirty' job.

Restrained investment due to market uncertainty is a clear theme. This is a concern as investment in state of the art technology drives productivity and performance in addition to creating capacity.

The UK already lags behind international peers in manufacturing technology investment and in times of tighter global competition the need for investment is ever more pressing. This needn't always be in large capital assets to create new capacity, but could be in digital and automation technologies that improve the performance and yield from an existing asset base.

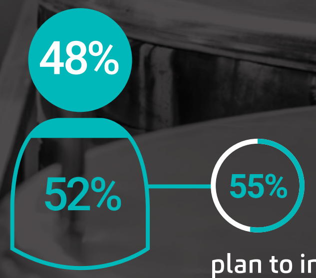
Sam Turner
High Value Manufacturing, Catapult (HMV)

There is certainly evidence that companies raised inventory in 2019 due to Brexit uncertainty. There was a pick up before each of the planned Brexit dates as companies prepared for the possibility of 'no deal' and then some rundown afterwards when Brexit was delayed. There is no real indication of a marked Brexit impact on inventory prior to 2019. However, it is possible that companies were caught out by the extent of the slowdown in 2018 and so found themselves with unwanted stocks.

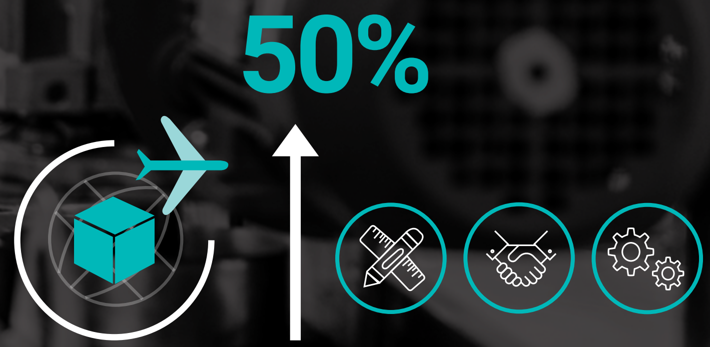
Rhys Herbert
Lloyds Bank Commercial Banking

2019 Trend Analysis

Here are the global views on 2019 filed accounts to date – giving an early indication of business behaviour over the last year. The comparative numbers for 2016, 2017 and 2018 are taken only from the companies who filled in 2019 for comparison purposes.



plan to invest in training current staff



Profit and Loss

	2016	2017	2018	2019
Revenue per £ Fixed Assets	20.11%	-1.77%	13.32%	8.55%
GP%	20.65%	19.75%	19.63%	18.69%
NP%	6.28%	7.28%	5.39%	4.90%
EBITDA%	10.55%	11.30%	9.03%	7.93%
Tax Rate	18.54%	13.24%	17.47%	15.93%
Employee Growth	3.95%	4.44%	-2.79%	12.12%
EBITDA per Employee	25.1K	25.3K	23.5K	20.0K

An early indication from the data is that businesses will see revenue growth but that margins will most likely continue to be squeezed, reducing all profitability measures. An interesting trend in the data shows that investment in employees has increased, suggesting businesses know they have been under increasing pressure over the last few years and need to act. Interestingly when looking at the client survey data just under half of businesses plan to take on new staff (48%) with 22% seeing recruiting skilled staff as a barrier to growth. For those who aren't recruiting 55% plan to invest in training current staff.

Balance sheet trend analysis:

	2016	2017	2018	2019
Revenue per £ Fixed Assets	6.69	6.13	7.21	7.43
GOGS/Inventory	7.71	7.41	7.74	7.51
Revenue/Inventory	9.72	9.23	9.63	9.24
Debtor Days	63.20	55.28	55.98	55.46
Working Capital % Revenue	22.14%	26.05%	25.24%	23.89%
Cash/ Revenue	7.54%	7.96%	8.96%	9.02%
Cash to Borrowing Ratio	74.52%	75.94%	99.13%	114.42%
Current Ratio	1.91	2.05	2.10	1.97

We are seeing continued limited investment in assets, increasing revenue per pound of asset even more. Inventory measures suggests the level of stock being held is continuing to increase.

Debtors days are still being well managed, although the reduction in working capital, and increase in creditors, suggests businesses are using suppliers to fund some of the investment in stock levels. Cash protection continues with an increase in the cash to borrowing ratio.

Case study:
Playdale

This North West company designs and manufactures outdoor playground equipment, exporting to just under 50 countries with plans to grow. Established for over 40 years, over the last 10 years, Playdale has increased its exports to 50% of its total output, accounting for a quarter of its turnover. It plans to further increase export sales by improving service and speed of business through general digitisation across the business, including design, sales and production. They have also recently invested in specialised digital equipment, and have successfully made R&D claims. The forward-thinking managing director, Professor Barry Leahey MBE, who featured in 'The Manufacturer Top 100 People in Manufacturing' in 2018, says their team, who are highly skilled and experienced, are key to the success of their business, and they are planning to hire further specialised staff.

> Playdale's experience is an example of how a well-run company can prosper when it invests in its people, even in a challenging global environment for manufacturing. The signs are that 2020 will see some of these pressures ease, which will hopefully create even more opportunities.

Dave Atkinson
Lloyds Bank Commercial Banking

What our clients said

This year MHA surveyed over 230 UK manufacturers and engineers to identify opinions in several core areas: their business as a whole including business confidence and growth, post Brexit, industry 4.0 and recruitment. We have then compared this to our finanial data analysis.

Brexit

Brexit strategy: 61% of businesses have a Brexit strategy in place, unsurprisingly this has almost doubled from last year (34%). Of those with a strategy in place 46% believe the impact will be limited, while 15% sense the potential impacts are extensive. 39% feel they cannot plan until they know more regarding negotiations

These results are not dissimilar to other surveys. Those showed a reluctance to spend money on Brexit plans due in part to uncertainty about the outcome. The reluctance was particularly marked amongst SME's. Indeed the indications were that larger companies were much better prepared than smaller companies. As Brexit dates approached, planning became more of a priority but that seemed to be primarily concentrated in accumulating inventory to see businesses through in initial shortages.'

Rhys Herbert
Lloyds Bank Commercial Banking

What the financial data says: Businesses are holding cash, reducing debt and not investing in fixed assets. This could be their Brexit strategy.

82% of businesses stated they have evaluated risk in their supply chain. Those 18% who have not yet done so should seek advice to ensure protection of their supply chain as we leave the EU. We asked what steps are being taken to address the identified risks. 32% have sought relevant guarantees, 31% have made changes to their supply chain and 26% don't feel there is anything that can be done to reduce risk. Only 11% of respondents have secured Authorised Economic Operator (AEO) status to reduce potential delays at customs. As changes to customs become imminent we suggest business should consider AEO status.

What the financial data says: Businesses are using their supply chain to fund working capital and reduce risk.

Revenue Growth: The next 12 months

Overall 70% of businesses are expecting to see growth in the next 12 months (71% last year), of that 13% are expecting 10+% growth (a 4%increase on last year), leaving 30% anticipating flat or no growth, the same as predicted last year.

What the financial data says: Yes, revenue growth is apparent, but at the cost of reducing margins.

What happens post Brexit will depend on what sort of deal we eventually agree with the EU. Internationally exposed companies are likely to be hit harder by Brexit but even those who concentrate on the domestic market could be hurt if their customers are exporters. For example, the car components industry may supply UK based car producers but the latter sell much of their product abroad.

Rhys Herbert
Lloyds Bank Commercial Banking

61% of businesses have a Brexit strategy in place.

82% of businesses stated they have evaluated risk in their supply chain.

70% of businesses are expecting to see growth in the next 12 months.

Main barriers to growth:

26% cited global economic conditions, 22% stated recruiting skilled staff and 19% had concerns around Brexit and future trading tariffs.

What the financial data analysis says: Yes, Brexit has had an impact on the financial strength and strategy of businesses.

Despite this uncertainty, 48% are still planning to make a significant capital investment in the next 12 months, though 52% are not planning to. Of those not investing, 39% put this down to Brexit uncertainty and 69% felt they invest as appropriate and have no foreseeable need.

What the financial data says: Early indicators for 2019 financial data show that businesses are starting to invest in fixed assets after years of not spending in this area.

Research and development

Research and Development (R&D) is defined as – ‘Investigative activities that a business chooses to conduct with the intention of making a discovery that can either lead to the development of new products or procedures, or to the improvement of existing products or procedures’.

Over the years R&D tax credits have been of huge benefit to the sector, yet a number of business still remain unaware of the reliefs available. We work with clients continuously to support them through the process to better understand qualifying activity.

Last year 89% of respondents invested in R&D. This is a 5% decrease and could be down to a number of issues the sector has faced, as outlined in the financial data.

Of those who invest, 48% had successfully applied for tax credits while 29% haven’t applied, 11% do not think they undertake relevant R&D and 5% are unaware of the tax credits. Not all activity will be eligible but many who have not claimed could probably do so and save their business thousands of pounds in the process.

When asked about R&D investment plans, 64% plan to invest a percentage of Turnover. Of those 64%, 25% plan to invest 1-2%, 23% less than 1% and 16% over 8%.

Competitors

Looking at the location of main competitors, 43% stated their competition as the rest of the UK (this is down from 58% last year). 21% felt competition was within their own region (this is down from 39% last year), and 14% cited the Eurozone, this has reduced by over half from 39% last year.

Business strategy for 4.0 and Robotic Process Automation

32% have considered a business strategy for 4.0 and robotic process automation but decided it isn’t right for their business, whereas 29% have one in place and see these as a key part of their future. 26% stated a strategy for 4.0 and Robotic Process Automation (RPA) wasn’t practical due to lack of infrastructure (e.g. lack of 5G technology) with 13% stated a lack of financial backing to invest.

It is encouraging to see that 32% have a strategy for technology investment but more needs to be done to help those organisations who don’t believe the technology has a role in their business. Evidencing the opportunity and the return on investment through national programmes such as Made Smarter will help.

Sam Turner
High Value Manufacturing, Catapult (HMV)

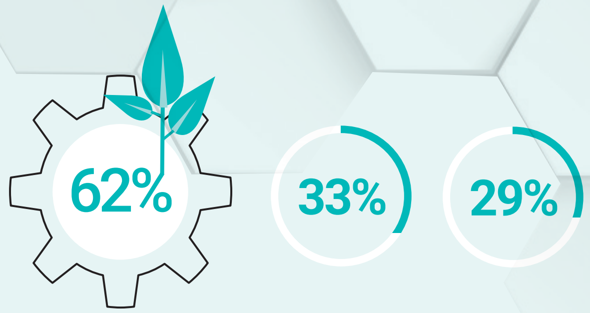
Environmental Impact

Thinking about environmental impact, we asked businesses if they had put measures in place to reduce the impact their business has on the environment in the future.

62% said they have with 33% of those saying it is the right thing to do and 29% who see this as a key approach to their business. Of the 38% who said no, 27% felt this was because changes cannot be made at the current stage while, 11% felt it was not a concern for their business.

It is encouraging that a large majority of companies have plans in place to lower their environmental impact. Reducing waste and increasing efficiency makes good financial sense, but companies are often reluctant to make the investments required. SMEs in particular have a very low awareness of the benefits of energy efficiency and in 2019 the Government conducted an investigation into the reasons for this. Various policy options are being considered to boost business energy efficiency, including green loans, energy efficiency auctions, and energy efficiency obligations. For companies looking for advice in this area, a good place to start would be the ‘SME guide to energy efficiency’ which was published in 2015 by the Department for Energy and Climate Change.

Matt Rooney
Institution of Mechanical Engineers



Case study:
Dufaylite

Dufaylite has manufactured recycled paper honeycomb for 65 years and in recent years developed added value products for the construction, retail display and packaging markets.

In each of our markets we are helping our customers to become more sustainable by helping them to replace any use of plastic, polystyrene, foam or PVC.

Not only does our product make customers packaging more sustainable and easier to recycle it also help reduce disposal taxes.

With our increasing demand we have invested heavily in our manufacturing operation to reduce energy use and improve efficiency to enable us to keep up with increasing demand.

This has included designing and developing our own new manufacturing lines and working on lean principles.

To do this we enlisted the help of the MTC, we have managed to deliverer our new manufacturing lines and we are achieving 300% increase in production speeds with product in a condition that no longer requires further processing.

Skills and what can be done to combat issues

A common theme throughout our years of surveys has been the skills gap and issues in recruiting.

One of the main barriers for businesses 2020 growth was recruiting skilled staff at 22%, this is up slightly from last year 19%.

Excluding apprentices, we asked how many businesses anticipated taking on new staff, 48% expected to see an uplift.

Looking at recruitment broadly in the sector 78% felt they have difficulty which has remained the same from last year. Delving deeper into that we asked respondents to select the categories they struggled to recruit the most; experienced engineers were 27%, slightly in front of skilled machinists/ technicians at 25%.

We then looked at the main reasons behind this 67% attributed it to a shortage of applicants, with the second most selected option being lack of motivated applicants locally (24%). Interestingly, most businesses didn't feel that competition from larger or smaller businesses affected this.

We asked if recruiting relevant skills is an issue, what is your strategy? 55% are investing in training current staff, 16% have a number of employees who have worked past retirement age, 15% are investing in technology to bridge this gap, while 13% selected 'other'.

> The pool of industry experienced people seems limited. We're now recruiting young office staff that have no industry experience and are training them.
>
> **Comment from a respondent**

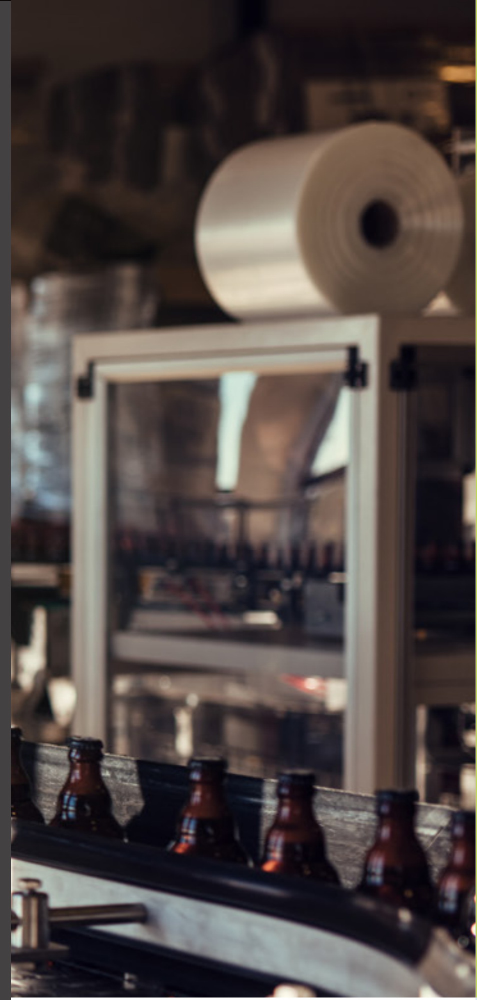
What the data says: EBITDA per employee steadily reducing; recruitment should be well planned and in line with identified capacity needs.

> There has been a consistent message from industry on a lack of skills being a barrier to growth. With reduced access to international talent, programmes that identify capability frameworks for manufacturing businesses and put make the skills content and delivery accessible are essential. There is a role for the IMechE and other professional institutions in partnership with innovation organisations such as the Catapults to map future skills needs and work with providers.

Sam Turner
High Value Manufacturing, Catapult (HMV)

These results are consistent with other surveys and with comments from BoE policymakers. The recruitment difficulties have grown as the unemployment rate has fallen. That in turn seems to have fuelled an acceleration in wage growth. And as companies have not been able to pass on the cost increase or offset it with productivity growth profit margins have been squeezed. There are now some tentative signs that these pressures are beginning to ease due to slower growth. However, they could re-emerge relatively if growth rebounds.

Rhys Herbert
Lloyds Bank Commercial Banking



> Engineering UK estimates that the country faces a shortage of up to 59,000 engineer graduates and technicians per year. As the response to this survey shows, it is not just recruiting recently qualified people that is a problem, but also finding experienced engineers with the right skills. People recruited as engineers in the 70s and early 80s have reached retirement age and the industry is beginning to face up to this generational skills shortage. This could be partially addressed through immigration policy. With the Government promising to introduce a new points-based immigration system after leaving the EU, this could be an opportunity to attract highly skilled engineers from around the world.

Matt Rooney
Institution of Mechanical Engineers

78% had difficulty recruiting

27% experienced engineers

25% skilled machinists/ technicians

What does the Job Market Tell us?

MyLMI track a million job adverts every day across the UK to present a comprehensive view of supply and demand of skills across sectors in the UK.

2019 saw an **18%** increase overall in engineering and manufacturing recruitment to **1.1 million** roles advertised but with a varied end to the year and a mixed regional picture. Q3 saw the largest drop by 19% with Brexit playing a part in the adverts specifically being called out by employers. The year ended extremely well though with a bump of 78% increase compared to the previous year, potentially linked to increased confidence. Regional performance saw double digit growth in all regions apart from **Wales and West Midlands** which saw small declines overall. The strongest regional growth was in **South West** and **Scotland** with 61% and 37% respectively. Top jobs and skills most in demand by volume remained multi-discipline Service Engineers (mechanical and electrical) and an acute shortage across all regions for CNC programmers, Welders and more niche but growing roles such as Hardware/Electronic design engineers.

Dom Murphy
CEO MyLMI

Contributer bios

Matt Rooney
Engineering Policy Adviser

Professor Sam Turner
Chief Technology Officer

Rhys Herbert
Senior Economist

Dominic Murphy
CEO

Matt Rooney is Engineering Policy Adviser at the Institution of Mechanical Engineers (IMechE).

After spending six years working on the design and manufacture of components for particle accelerators at the Harwell Science and Innovation Campus, he returned to study at the University of Cambridge where he primarily researched strategies for bringing down the cost of new energy technologies, with a particular focus on carbon capture and storage and small modular nuclear reactors. Following this, he spent 18 months as a Research Fellow at a prominent think tank in Westminster before finally joining the IMechE in May 2018.

He is a British Science Association Media Fellow, having worked briefly as a science policy journalist with Times Higher Education. He is a fully chartered member of the Institution of Mechanical Engineers and holds an MEng in Mechanical and Manufacturing Engineering from the Queen's University Belfast.

Professor Sam Turner is the Chief Technology Officer (CTO) of the High Value Manufacturing (HVM) Catapult.

He joined the HVM Catapult team from his role as CTO of the Advanced Manufacturing Research Centre (AMRC) with Boeing, where he worked on a range of projects and capabilities including the flagship digital facility Factory 2050, machining, casting and composites technology.

As a founding member of the AMRC, Sam developed the AMRC's Machining Group to its current level of 85 staff and £5M turnover, with successes in delivering impact to UK industry, before moving into the CTO role. In addition to his industrial work, Sam has secured Innovate UK, EPSRC and EU funding for over £20M for manufacturing R&D in machining and automation.

He has written over 40 publications, including 16 journal papers in the area of machining. Sam is active in machining, automation and digital manufacturing and chairs the Digital Engineering and Manufacturing Leadership Group.

Rhys Herbert is a Senior Economist in the Research Department of Lloyds Bank Commercial Banking.

He is responsible for analysing and forecasting trends in the UK and other major economies, with a special interest in the manufacturing sector. Rhys joined Lloyds Bank in January 2011. Prior to this, he worked at the economic consultancy Oxford Economics where he headed up its industry forecasting service.

He has also worked at the Office for National Statistics, Prudential Assurance Corporation, Credit Lyonnais Bank and the National Institute of Economic and Social Research.

Rhys has a MSc in Economics from the University of London.

Dominic Murphy is the CEO of MyLMI, a labour market intelligence firm specialising in education, skills and job market data with a unique product set used by businesses of all sizes, local authorities, central government departments and education institutions.

Their products process data from over one million job adverts per day and 17 million CVs in the UK as well in addition to other countries, providing the most comprehensive view of skills supply and demand available anywhere to support improved recruitment, learning and development and retention of staff.

Dominic previously founded and led the consulting group of an 800-person global IT and BPO firm, purchased by Capgemini Financial Services in 2011, providing IT Transformation services to the financial services industry while working with multiple Tier-1 Global Investment Banks. Dominic then worked with Credit Suisse for a number of years after the financial crash, specialising in the delivery of improved bank regulation and calculation of financial risk.

Quantitative approach - Methodology:

In order to assess the performance of the Manufacturing and Engineering sector over the last 4 years we identified companies that met the following criteria:

- Actively trading at the time of creating the report
- Have an appropriate SIC code for the sector
- Have filed full accounts (including Profit and Loss) for the last four years
- To avoid the risk of double counting is not a parent company.
- Turnover less than £200m in the last financial year to focus on SME's and remove the influence of very corporations.

By capturing consecutive accounts for the last 4 years, we can see how these companies have performed over time without the numbers being influenced by new entrants or those ceasing to trade.

*Information used in based on those businesses who filed accounts.

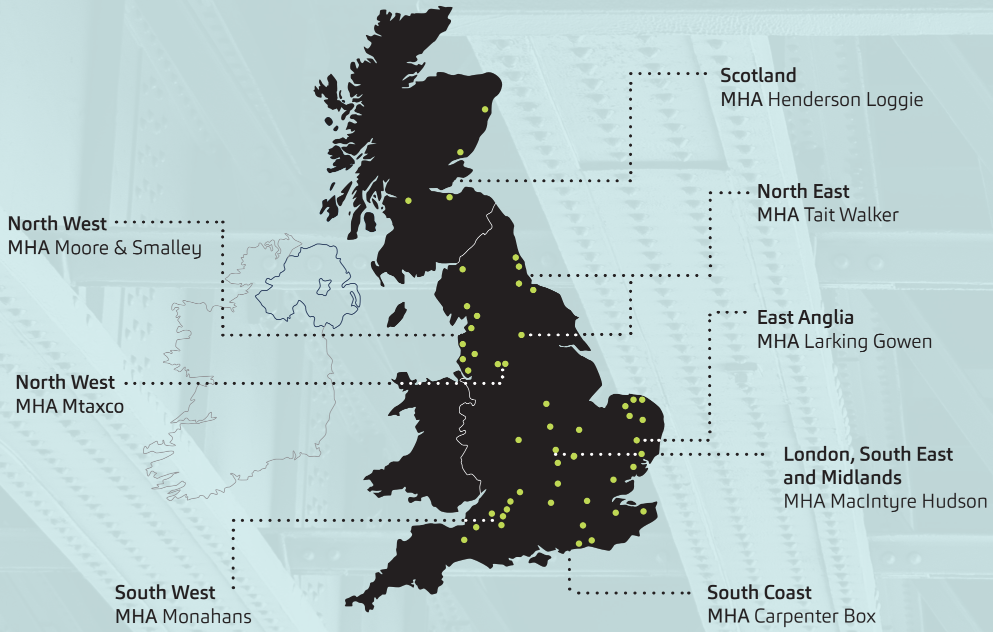
Our Sector Approach

MHA allows clients to benefit from in depth sector knowledge in addition to specialist accountancy services and expert business advice. Manufacturing and engineering is a key sector for MHA, and we are committed to assisting both our clients and the sector as a whole by promoting manufacturing and engineering in all of its forms throughout the UK.

About us

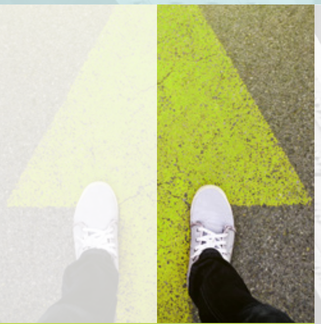
MHA members are progressive and respected accountancy and advisory firms with offices in over 50 locations across England, Scotland and Wales.

We provide both national expertise and local insight to clients. As an independent member of Baker Tilly International, a top 10 global advisory network, MHA offers clients unparalleled access to a broad range of in-country international specialists where overseas projects are on the horizon.



National Reach

50+ Offices nationwide



8 Independent accountancy firms

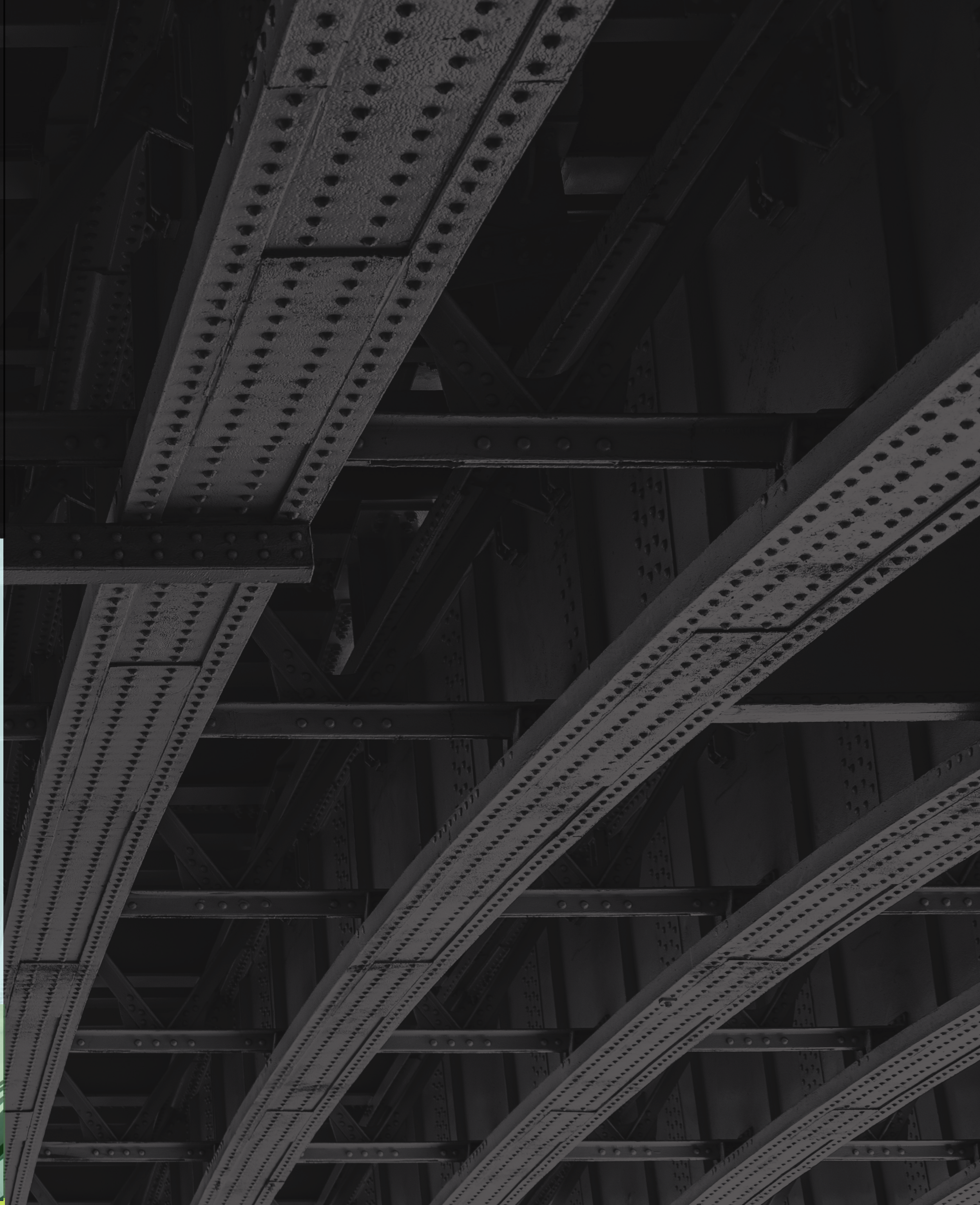
Combined turnover of £143m

International Reach

125 Member firms in 145 territories

10th Largest network in the world by combined revenue

US$3.6bn Combined member firm revenues



To find out more about the accountancy and business advisory services MHA can offer, please contact

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