

# Pay scale

The results of The Engineer's 2015 salary survey provide a fascinating glimpse into the engineering profession and how salaries vary according to sector, seniority and region

## £55.3k – £42k

### average salary by sector



**H**ow often do you ask yourself if engineers in a different sector are earning more than you? Or even whether your skills might bring greater rewards in a completely different industry altogether?

In which sectors of industry do engineers feel happiest and most satisfied with their work and pay? And can you expect to earn more in one region than another?

These are just a few of the questions that we set out to answer in our 2015 salary survey. And with 4,365 engineers from across the UK and from 18 sectors of industry taking part, the results provide a fascinating and revealing snapshot of the profession today.

Judging from the tenor of comments on The Engineer website, it is fair to say that UK engineers often feel pretty hard done by when it comes to how much they get paid.

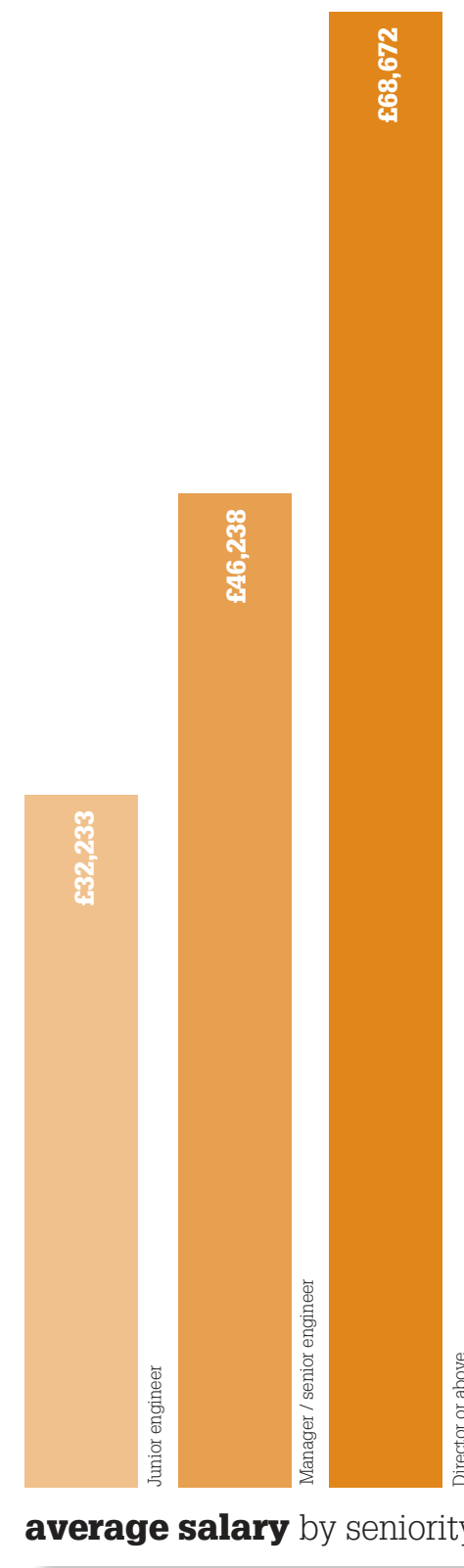
But, as we have frequently reported, while industry doesn't often see the kind of stratospheric salaries commonly associated with some parts of the financial services sector, engineering pay is actually pretty good: well above the UK's national average, and frequently higher than average salaries in other professional sectors.

Our survey results bear this out, with the average salary for engineers across all sectors standing at £45,055.

**“ The highest earnings can be found in the energy and fuel sectors. Engineers in oil and gas top the table, earning £55,265 on average**

This is below the level that professionals working in banking and accountancy can expect, at around £54,000 and £51,000 respectively. But it is above that for both the financial services industry, at around £46,000, and the legal profession, at approximately £39,000.

The highest earnings can be found in the various energy and fuel sectors. Engineers in the oil and gas sector top the table, earning £55,265 on average, while those in the energy/renewables/nuclear industries receive £54,408 and £52,471 respectively. Outside energy and



### average salary by seniority

fuel, engineers in the defence and security/marine sector command the next highest wages, at an average of £53,151.

The largest percentage of the engineers we surveyed work in the UK's booming automotive industry, with the group making up 13.6 per cent of those questioned.

There were few demographic surprises from our sample group. The overwhelming majority — 95.5 per cent — were male, and the average age was 44.

In terms of seniority, most classed themselves as senior engineers or managers,

**david leyshon**  
Chairman, CBSbutler



Today's 'engineer' has rarely been valued so highly or been so sought after, driven by the current war for talent. The combination of an ageing workforce,

decades of under-investment in apprenticeships and a lack of young people entering the engineering profession has resulted in serious shortages at all levels.

In a world where we are faced with mega problems, for example over-population, shortage of resources and environmental issues, it strikes me that engineers have a huge part to play. It is their ingenuity and ability to harness new technologies that will invariably provide the solutions that we all seek.

However, engineering as a profession still has much to do to promote itself as a career of choice. Clearly the misconception of the stereotypical engineer holding a spanner and an oily rag does play its part. Despite many new initiatives to attract young people into the sector, there remain many challenges in meeting industry needs and in closing the skills gaps. Notably, prominent industrialists such as James Dyson have expressed their concerns over the future generation of engineers and indeed the impact this could have on the business economy.

One of the obvious talent pools that has yet to be harnessed is the female population, where traditionally there

has been a very low uptake into the engineering industry. Indeed, we only need to look at countries such as Germany where engineering is at the pinnacle of professions to witness a far greater diversity.

With decades of experience in recruiting within engineering across a wide range of sectors, CBSbutler can attest to having specialist insight into both the opportunities and challenges afforded to job seekers. Well-qualified, highly trained and experienced engineers really do have a wealth of options at their disposal — both domestically and globally. Moreover, those individuals who prefer flexibility in their work will find strong demand, lucrative earnings and continuity of employment via freelance contracting.

However, we cannot ignore some of the less positive findings. It is a fact that earning levels within many areas of heavy engineering and manufacturing still lag behind other sectors. Also, a relatively high number of experienced engineers leave the profession through disillusionment with career prospects.

A major challenge is the chronic age demographics befitting strategic sectors such as oil and gas and construction. The decades of failing to attract the younger generation into engineering roles and cutbacks in apprenticeships has certainly taken its toll. The UK has much catching up to do. There is a clear responsibility across government, education and industry to turn around this situation given the severe implications on UK business competitiveness.

In summary, the sheer volume and diversity of job opportunities will ensure that most engineers have a stimulating and rewarding future. The forecasted skill gaps and shortages are unlikely to change for many years, resulting in attractive earnings and progression for talented professionals. At last there is a realisation that 'the engineer' is central to achieving a competitive business economy and is firmly on the map.

**“ Despite only 35 per cent feeling that their earnings suitably reflect their workload, the majority expect to remain in engineering for the next five years**

and almost half of those surveyed have worked in engineering for between 20 and 40 years.

It seems that — on the whole — the UK's engineers are a pretty satisfied bunch. And despite only 35 per cent feeling that their earnings suitably reflect their workload, the vast majority (84 per cent) expect to remain in engineering for the next five years.

Over the following pages we've gone into more detail on some of these findings, and looked at what they might mean for both individuals and industry as whole.

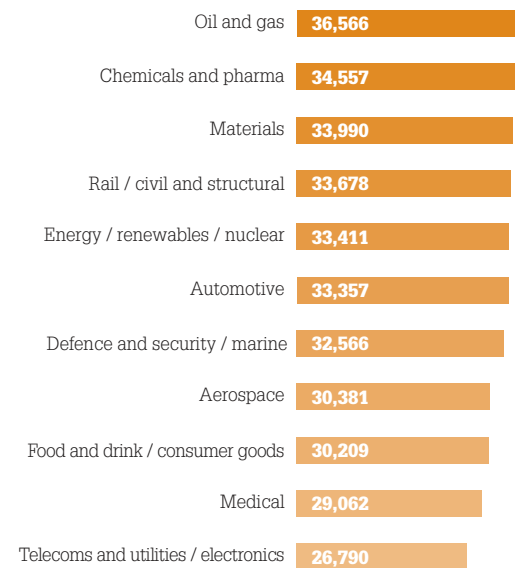
*Click here to make use of our specially developed online salary calculator, and see how your salary stacks up against those of your peers.*  
<http://salariesurvey.theengineer.co.uk/> ->

# £45k

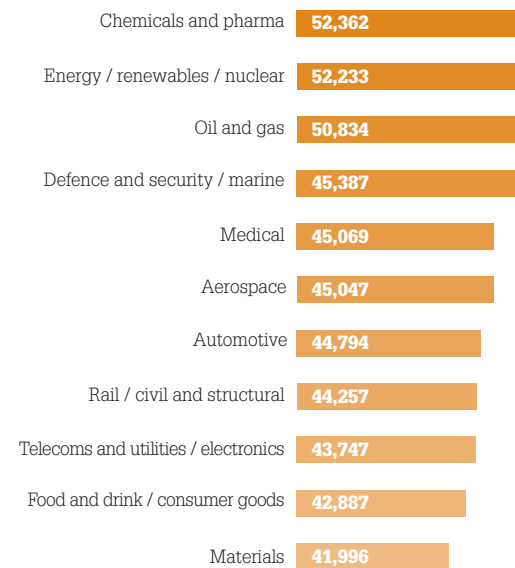
Average salary for engineers across all sectors

## average salary by industry

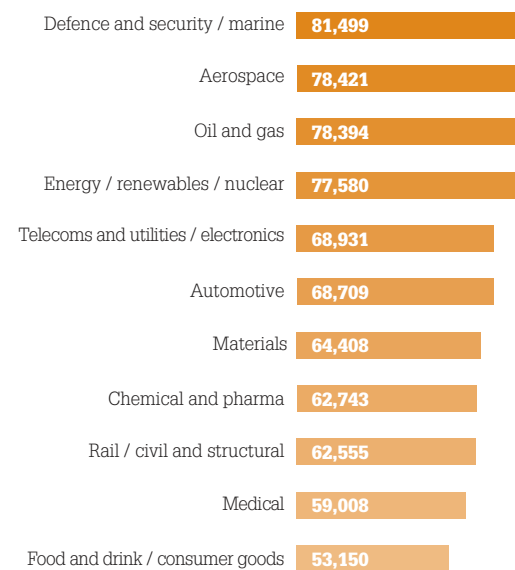
### junior engineer



### senior engineer / manager



### director or above



The average salary of directors or above working in the defence and security/marine industries

## 1. seniority

In terms of seniority, the response reflects *The Engineer's* audience of senior engineers. More than 80 per cent of respondents describe themselves as senior engineers or above: 45.5 per cent as senior engineers, 31.3 per cent as managers and 6.3 per cent as directors.

The overall average salary for a junior engineer is £32,233; for a manager/senior engineer it is £47,238; and for a director or above it is £68,672.

However, there is huge variation between sectors: a director or above working in defence and security earns almost £30,000 more than someone of similar seniority in food and drink.

What's more, it doesn't follow that the sector

**More than 80 per cent of respondents to the salary survey describe themselves as senior engineers or above. However there is huge salary variation between different sectors**

that pays the highest director salaries also pays more for its junior engineers and managers. Indeed, salaries for junior engineers in defence and security sit near the bottom of the table, while the chemicals and pharmaceuticals sector ranks highly for both junior and senior engineers.

Interestingly, considering the difficulties that it's currently facing, the oil and gas sector features in the top three for all levels of seniority.

## the age of the UK's engineering workforce

The ageing nature of the UK's engineering workforce has been the subject of significant debate in recent years, with many concerned that the impending retirement of many of our most highly-skilled and experienced engineers could lead to crippling skills shortages in a number of key sectors.

But here our survey offers some cause for optimism. Of those questioned, the average age of engineer was 44. Engineers in the civil and structural engineering sector are the youngest on average, at 40, while the oldest in the profession can be found in the process industry, with an average age of 45.

These averages hide a slightly more worrying trend though, since more engineers can be found in the 50-54 age band (16.6 per cent) than any other, suggesting that many will be retiring over the next ten years. Meanwhile, at the other end of the spectrum, just 12 per cent of the engineers we surveyed were under 30.

## 2. regions

Respondents to the survey were spread throughout the UK and beyond, and provide an interesting glimpse of regional salary variations across the different engineering sectors. The regional spread also provides a reminder that, contrary to perceptions outside of the industry, a high proportion of engineering roles are based in London and the south east.

Perhaps unsurprisingly, London and the south east offers the highest salaries in many of the sectors and for a number of sectors outperforms the regions that are typically regarded as centres of excellence. For instance, automotive and aerospace expertise, which tends to be concentrated in the West Midlands and the south west respectively, commands a higher salary in the south east. Indeed, somewhat surprisingly, our results suggest that the south west actually offers the poorest salaries in the aerospace sector.

Although most regional variations are relatively small, the sector that seems to vary most according to location is automotive. Here, the highest average salary is found in London and the south east (£51,333), while the lowest

## where are the UK's engineers?

26.7%	East Anglia, West Midlands and East Midlands
20.9%	London and south east
18.7%	North
13%	South west
11.7%	Outside of the UK (roughly split between Europe, US and Asia-Pacific)
9.1%	Wales, Scotland, Northern Ireland

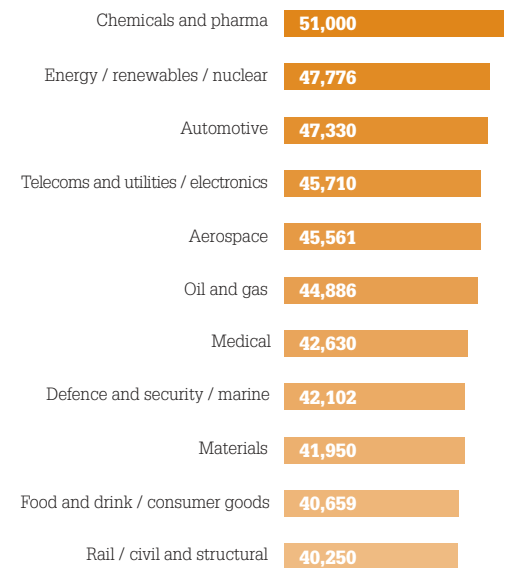
**Regional variations in salary are relatively small. Salaries in the automotive sector appear to be most affected by location**

within the UK (£38,720) are found in Scotland, Wales and Northern Ireland. Some of the highest salaries on offer are found outside the UK.

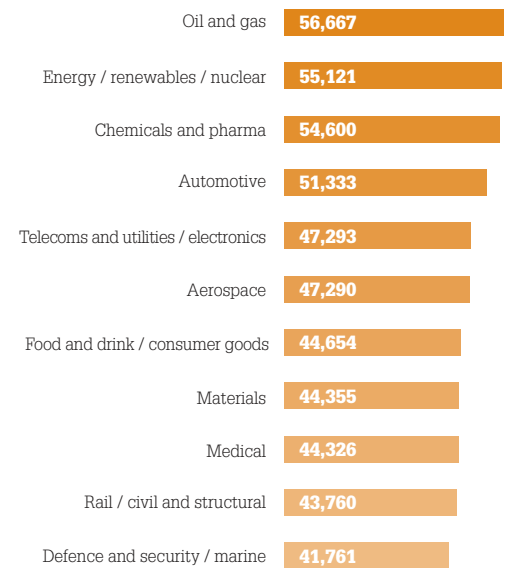
Job satisfaction levels show minor variations according to region, with engineers in Scotland, Wales and Northern Ireland coming out on top in the happiness stakes (51.6 per cent).

Engineers in the south west are least likely to be happy with their salaries (31.9 per cent believe they are fairly remunerated), while engineers in the Midlands and East Anglia show the highest levels of contentment with their pay (35.6 per cent).

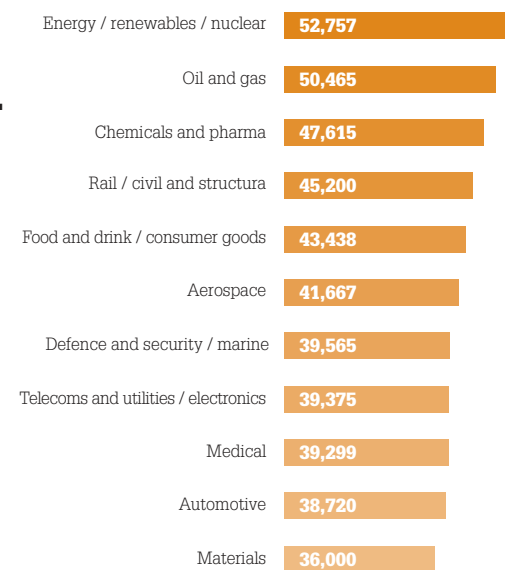
## midlands and east anglia



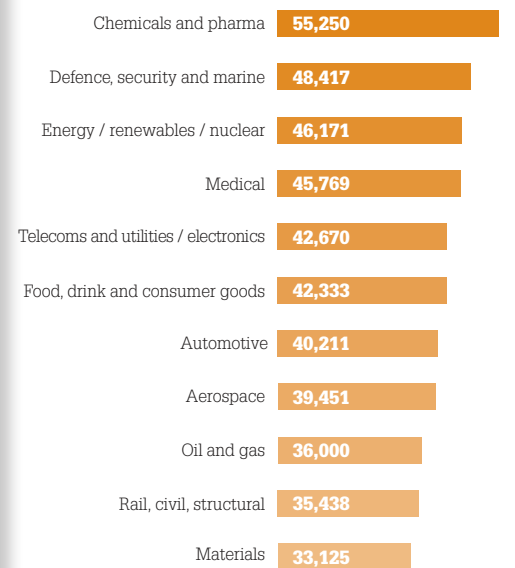
## london and south east



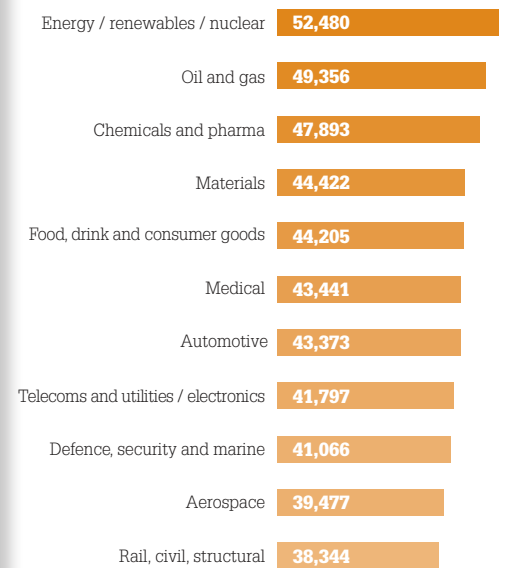
## scotland, wales and NI



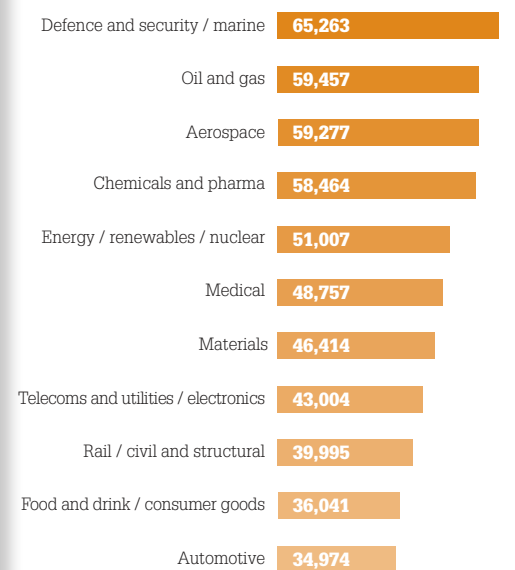
## south west



## north

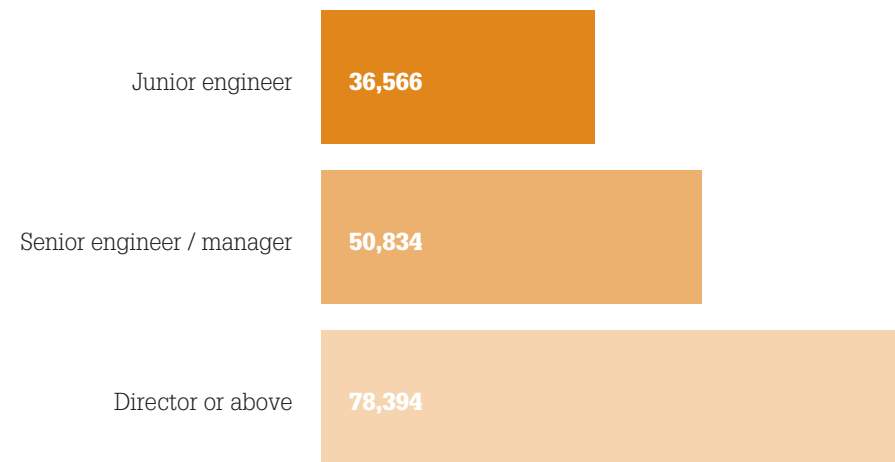


## outside UK





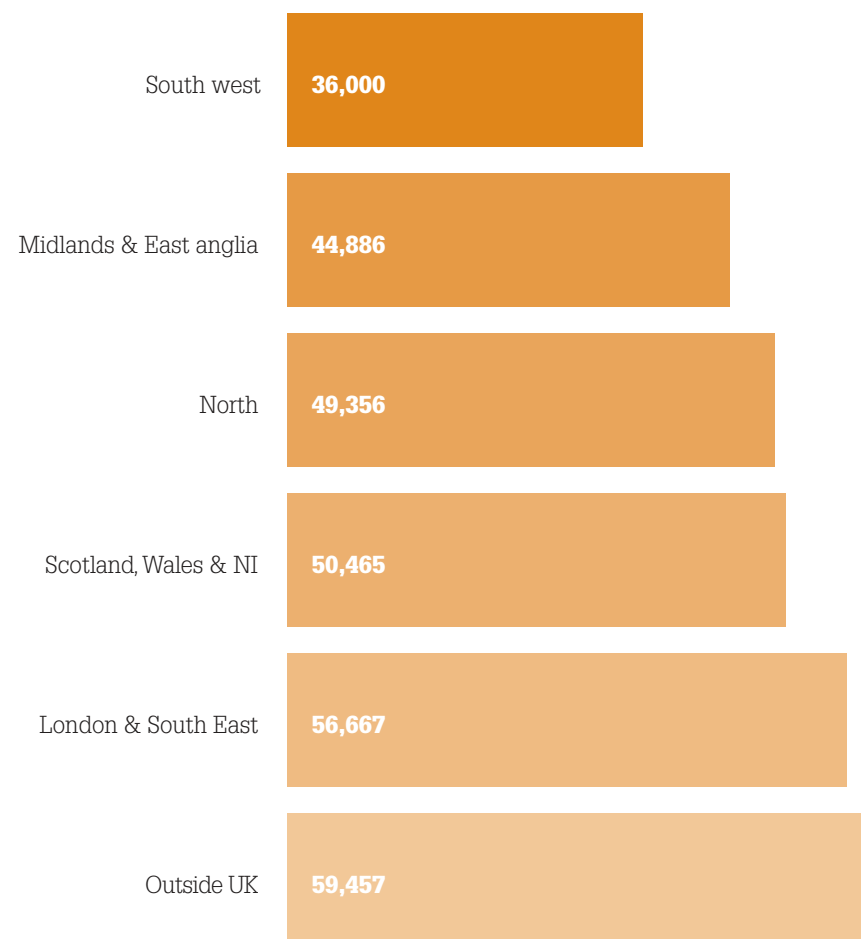
## average salary by seniority



# £50.8k

The average salary of senior engineers working in the oil and gas sectors

## average salary by region



## 01. oil & gas

It is no secret that the UK's oil and gas industry is facing challenging times. As North Sea wells decline, producers are having to drill in harsher environments, while the recent decline in the price of oil has hit margins.

But with up to 24 billion barrels of oil potentially left to recover from the UK Continental Shelf, demand for skilled engineers remains high. As a result, salaries in the sector are also high, with the average oil and gas engineer earning £55,265, which is more than any other sector covered by the survey.

Engineers working in the sector accounted for 8.6% of overall respondents, and -

**“ Despite a challenging climate, salaries in the oil and gas sectors were higher, on average, than salaries in any other engineering sector. Satisfaction levels are correspondingly high**

somewhat surprisingly – appear to be fairly evenly spread throughout the UK. The largest grouping (24.5 per cent) are based in the North of England, closely followed by London and the south east which accounts for 18.5 per cent of those taking part.

The highest average salaries in the sector (£59,457) are found outside the UK, although salaries in London and the South East – home to the UK corporate headquarters for many of the biggest players – are also high (£56,667). The lowest paid region, according to our survey, is the South West where professionals in the sector average around £36,000.

In terms of seniority, the gap between junior engineer and those at director level or above is relatively pronounced, with the sector boasting the highest average director level salaries (£78,294).

Against this backdrop, satisfaction levels are also understandably high. 57.1 per cent of respondents from the sector say they are happy in their current job and 46.9 per cent are happy with their salary: the highest percentage of the industries surveyed.

In demographic terms the sector mirrors much of the rest of industry with 93.6 per cent of respondents describing themselves as male, and just 6.4 per cent as female.

However, it performs relatively well in terms of ethnic diversity, with 9.6 per cent of respondents describing themselves as either black, Asian, or minority ethnic (BAME).

## 02. energy / renewables / nuclear

With the drive to reduce the UK's greenhouse gas emissions, both the renewables and nuclear industries are in vibrant health.

The UK is on the verge of a nuclear renaissance, with plans for at least 12 new plants, accounting for just under half of the country's generating capacity. Meanwhile renewables reached a record share of the UK's electricity generation in 2014, contributing 19.2 per cent of the country's power mix.

Average salaries in the sectors - which account for 8.8 per cent of response to the salary survey - are correspondingly high with engineers earning on average £54,405. This puts the sector in second place behind the highest-paying industry, oil & gas.

There is some variation in salary across the different regions although this is not as pronounced as in some other sectors. The highest average salary is found in London and the South East, where engineers working in renewables, nuclear, or energy earn £55,121 on average. The lowest is found in the South West, where engineers earn on average £46,171.

There is obviously also some variation according to seniority, and the gap between those at director level or above (£77,580) and engineers further down the ladder is more marked than in some of other sectors covered in the report.

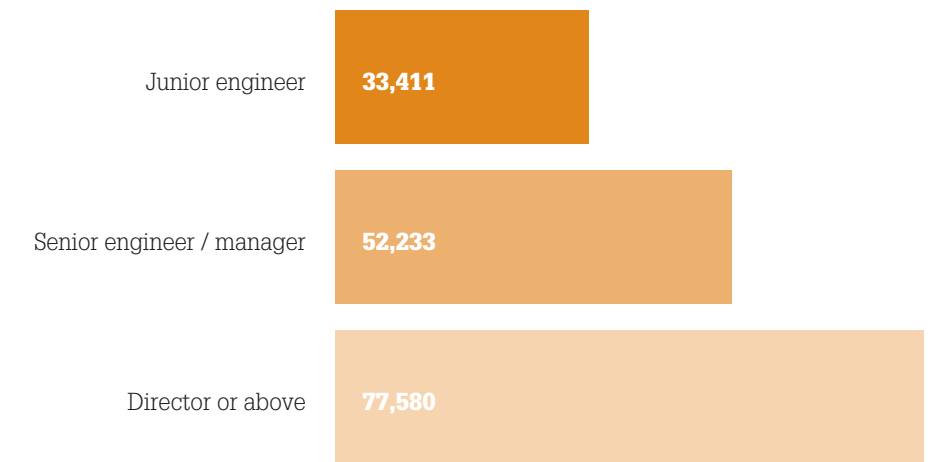
Interestingly, despite the relatively high salaries on offer, engineers in these sectors don't appear to be particularly happy with their level of remuneration. Just 39.3 per cent say that

**“ The various energy sectors are at the heart of the UK's plans for the future, and high average salaries across the board reflect the industry's priority status**

they are content with their salary compared to 46.9 per cent of engineers in the only marginally better-paid oil and gas sector. Despite this, contentment levels are relatively high, with 57 per cent of those surveyed happy in their job, and 86.4 per cent saying that they are likely to stay in industry for the next five years.

The average age of engineers working in these sectors is 42.6 and 93.9 per cent of those responding are male. 6.4 per cent of responses came from members of the black, Asian or minority ethnic communities.

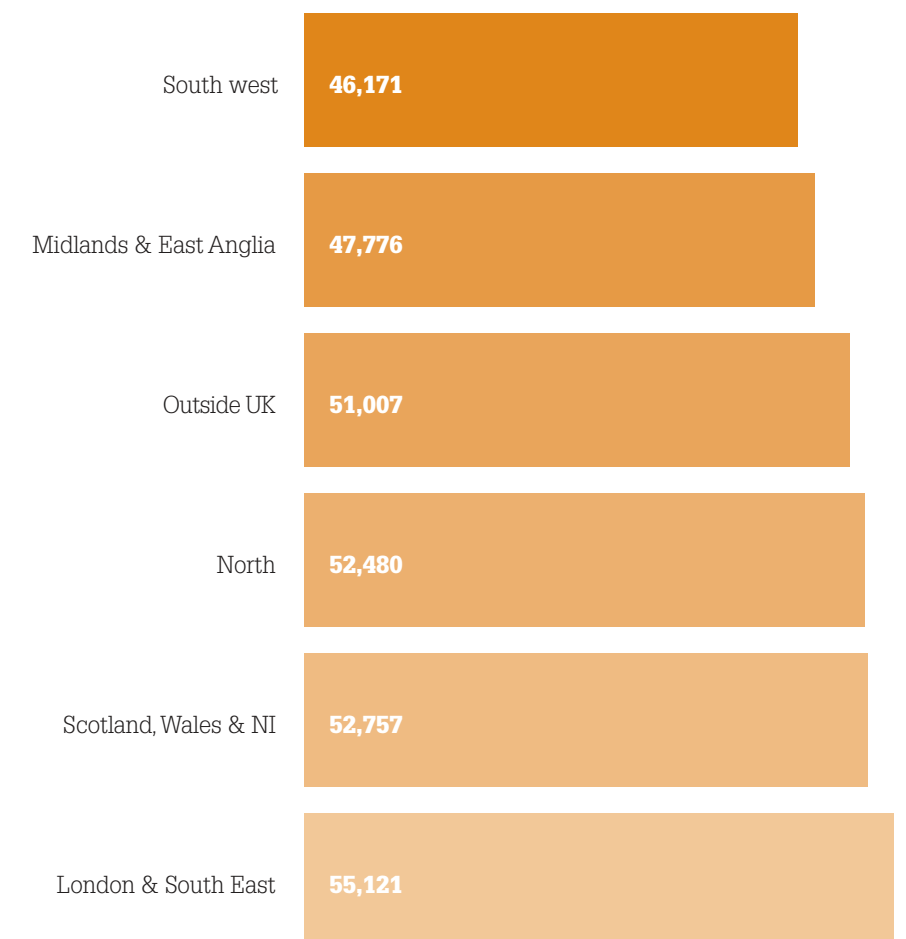
## average salary by seniority



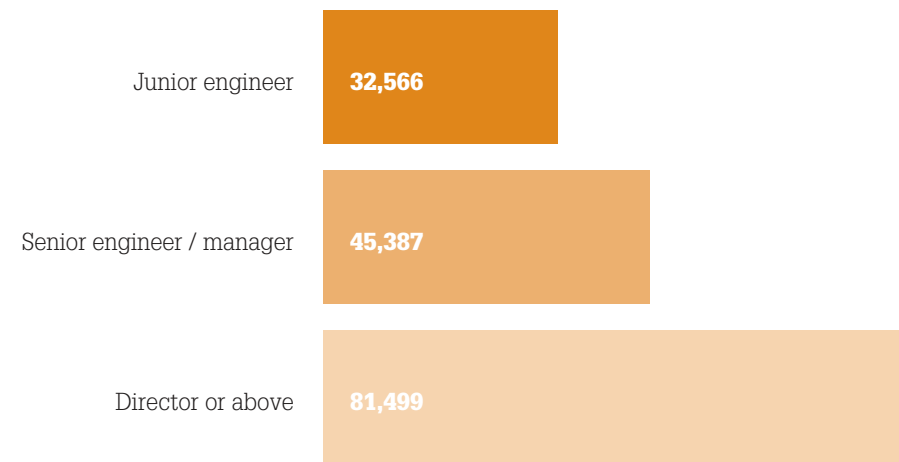
# £52.2k

The average salary of senior engineers working in the energy / renewables / nuclear sectors

## average salary by region



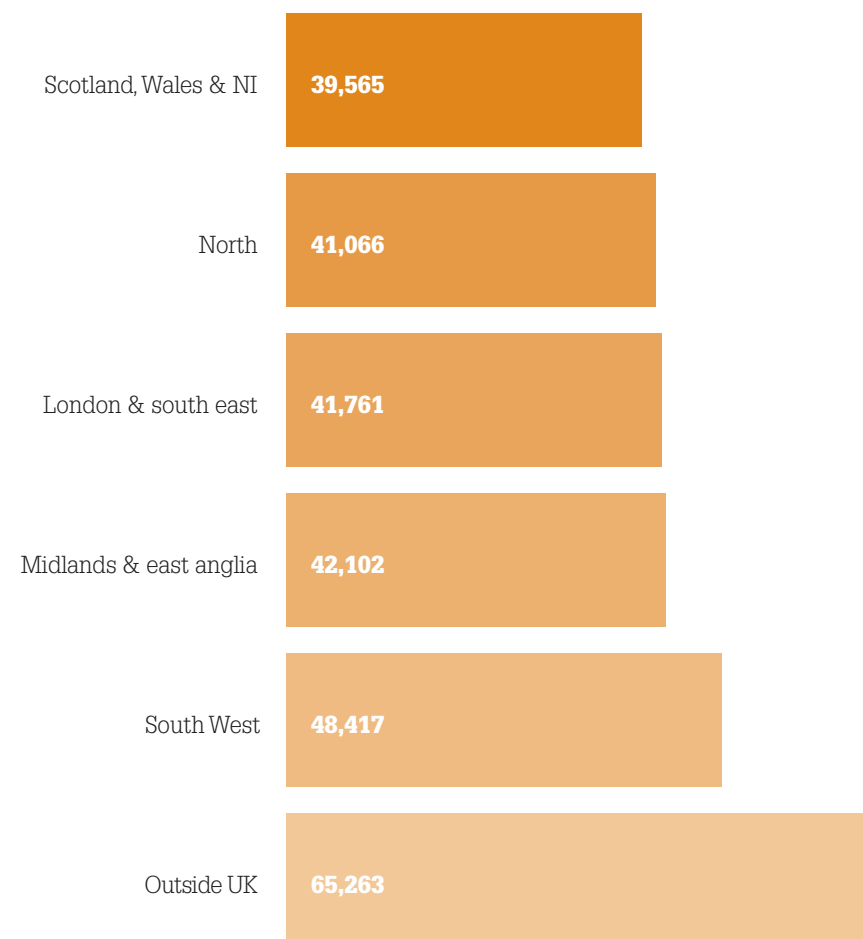
## average salary by seniority



# £45.4k

The average salary of senior engineers working in the defence and security/marine industries

## average salary by region



## 03. defence and security / marine

Despite recent headlines about cuts to the UK's military spending, the country still has the biggest defence budget in Europe, investing over two per cent of its income on the armed forces and its equipment and support.

The International Institute for Strategic Studies notes that Britain's 2013 defence expenditure ranks it fifth in the world behind the USA, Russia, China, and Saudi Arabia. The industry as a whole has an annual turnover of £22bn and defence export sales stood at £9.8bn in 2013, an 11.4 per cent increase on 2012.

“ Despite cuts to defence spending, salaries in the defence & security / marine sectors are the second highest, on average, of all the sectors featured in the survey. 95 per cent of all respondents are male

Engineers working in the defence & security / marine sectors account for 5.9 per cent of all respondents. The average salary for engineers working in the sector is £53,151, which places it just behind oil and gas and energy as one of the most highly paid sectors covered by the survey.

Unlike some other sectors, regional salary variation does not appear to be particularly marked within the UK. Engineers working in Scotland, Wales and NI earn the lowest average salaries (£39,565) whilst those working in the South West earn the highest (£48,417). However, engineers working overseas appear to earn considerably more on average (£65,263)

Satisfaction levels are reasonably high when compared with other sectors. Just over half of engineers surveyed are happy in their current jobs, and only 46 per cent are considering switching to another sector. This is the lowest percentage of any sector featured in the survey. Despite this, and despite the relatively high salaries, satisfaction with the level of pay is relatively low, with just 28.5 per cent saying that they are happy with their salary.

Of the engineers surveyed from the defence, security, and marine industries, 95 per cent are male. The average age is 43, and just 4.4 per cent of those come from black, Asian or ethnic minority groups.

## 04. aerospace

The aerospace sector is one of the UK's most successful industries, with a value of around £20 billion. It employs around 250,000 people across the country.

Engineers employed primarily by this sector account for the second largest group after automotive (8.6 percent) and earn a slightly higher salary on average (£51,283). This compares very favourably with the average salary across all sectors, which is £45,066.

Aerospace engineers based overseas command the highest wages in the sector, at £59,277, while those in the South West – home to much of the UK's aerospace expertise and

“ 8.6 per cent of respondents work in the UK's thriving aerospace sector. UK salaries are highest in London and the South East, and lowest in the sectors heartland: the South West.

just over a quarter of respondents from the sector - take home the least, with an average of £39,451. The second highest average salaries (£47,290) are found in London & the south east, which accounts for 18.9 percent of aerospace respondents,

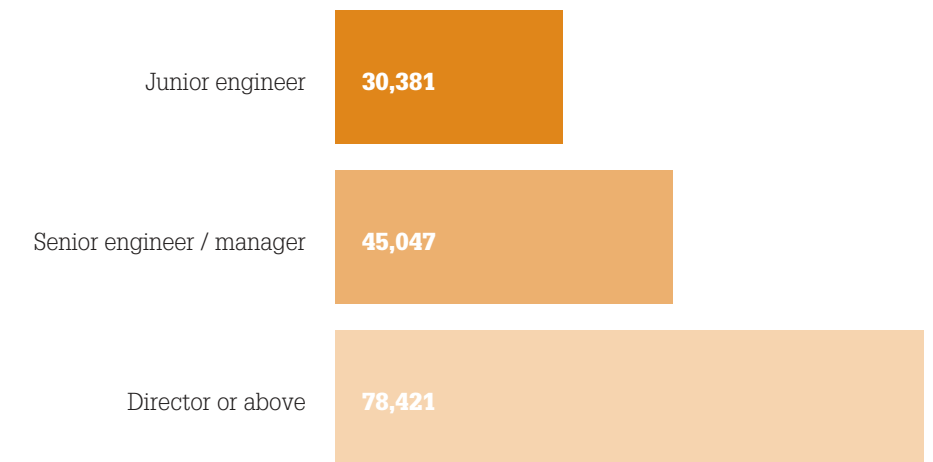
The salary spread according to seniority is slightly more pronounced than in many other sectors, with junior engineers (average salary £30,381) earning less than half that of engineers at director level or above (average salary £78,421)

Satisfaction levels in the sector are similar to those in engineering as a whole, with 50 per cent happy in their jobs, while 32 per cent feel they are appropriately paid and 89.6 per cent of those surveyed say that it's likely they will be staying in industry for the next five years.

Over half of the respondents from this sector (51.5 per cent) believe that industry knowledge is a skill lacking in industry today, whilst 41.4 per cent believe engineers also need to get better at communicating.

Of those aerospace engineers surveyed, 95 per cent are male, and 92 per cent are white. The average age is 42, while 17 per cent of engineers in the sector are below the age of 30, higher than that for engineering as a whole

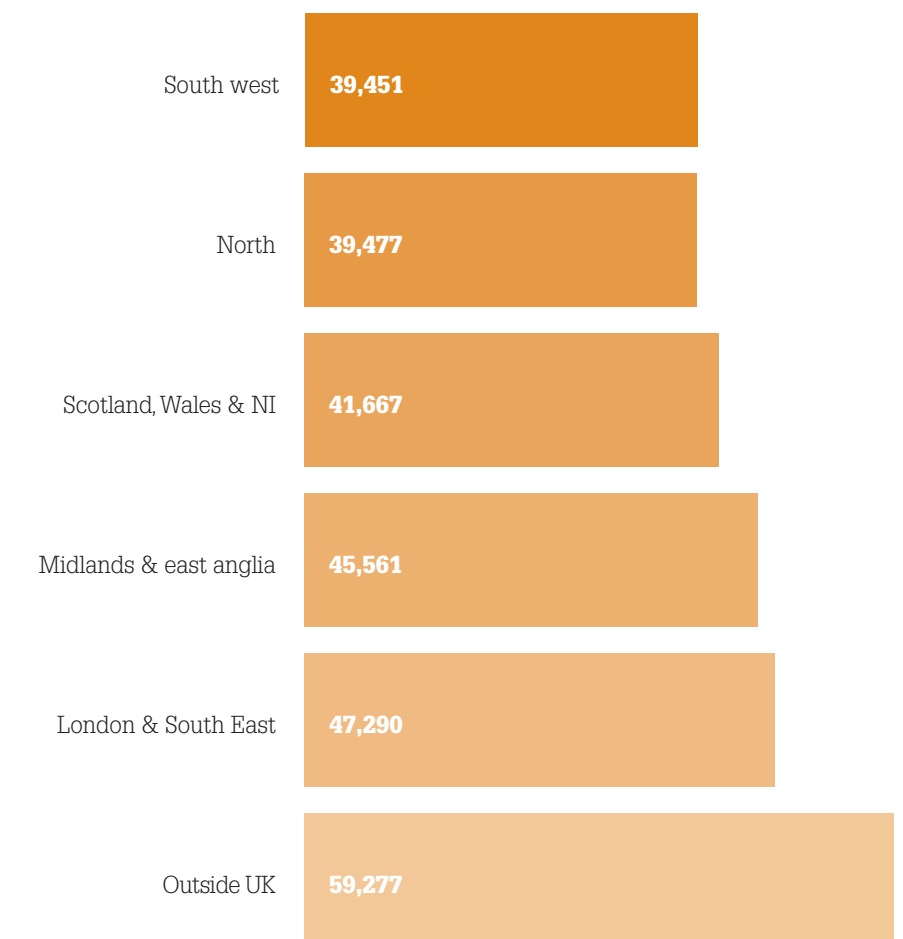
## average salary by seniority



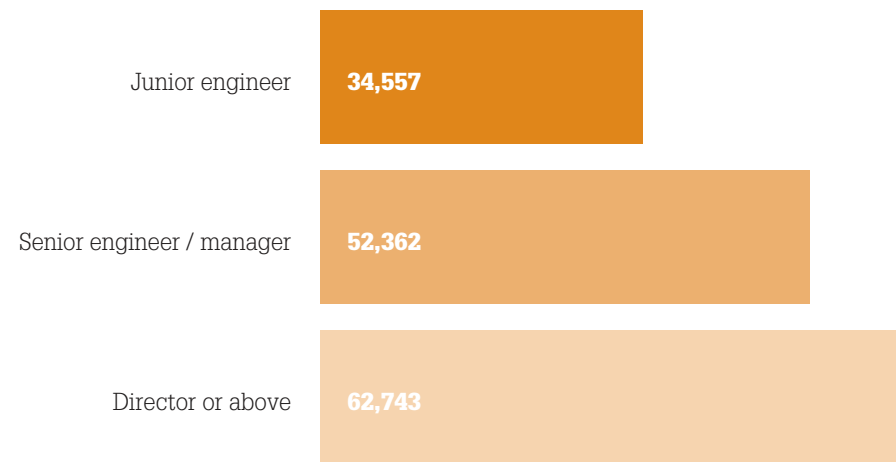
# £45.5k

The average salary of senior engineers working in the aerospace industries

## average salary by region



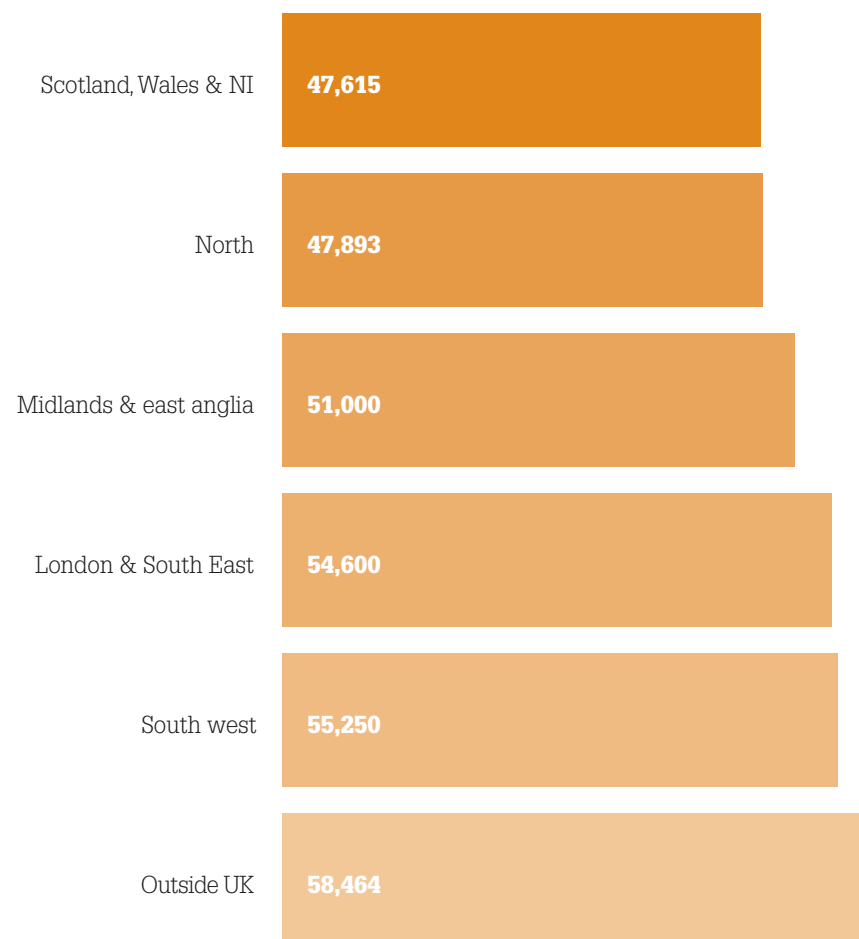
**average salary by seniority**



£52.4k

The average salary of senior engineers working in the chemicals and Pharmaceuticals sector

**average salary by region**



**05. chemical / pharma**

The chemical and pharmaceutical industries are vitally important to the UK economy. Every day the country's pharmaceutical industry spends £12.5 million on research and development, while the chemical sector has an annual turnover of more than £57 billion. The average salary in the industries is correspondingly high, at £49,887 per year. The sector is also the most generous for bonuses, with 62 per cent of those in the industries receiving one, compared to an average for engineering as a whole of 47 per cent. Around one quarter of those surveyed are based in the North West of England, while

“ **The chemical and pharma sectors offer high average salaries, and generous benefits. 62 per cent of those working in the sectors receive an annual bonus.**

a significant proportion of engineers, 18 per cent, are based overseas, the majority of whom work in mainland Europe. And those process engineers based outside the UK earn significantly more than the average, on £58,464, while at the other end of the scale those in Wales, Scotland and Northern Ireland take home around £47,615. Men accounted for 95.1 per cent of those responding and the average age for the sector is 45. Just 2.8% of respondents come from a non-white ethnic group, making this one of the least ethnically balanced sectors in the report.

**Employer focus**

supported by 

**Despite a hostile climate in oil and gas and chemical production, there is never a shortage of engaging opportunities within both the chemical and pharmaceutical marketplaces in the UK. Healthcare and promoting quality of life continues to be a key priority across all political forums, with major investment in new drugs and a drive to bring better products to market quicker, more efficiently, and to a wider audience. In chemicals, the challenge as ever is quality and availability of professional engineers, and the ability to drive down raw material costs, increase production efficiencies, comply with tightening EHS regulations and compete with cost-effective overseas competition.**

**Matt Lawrence**  
Director of Engineering Recruitment, SRG

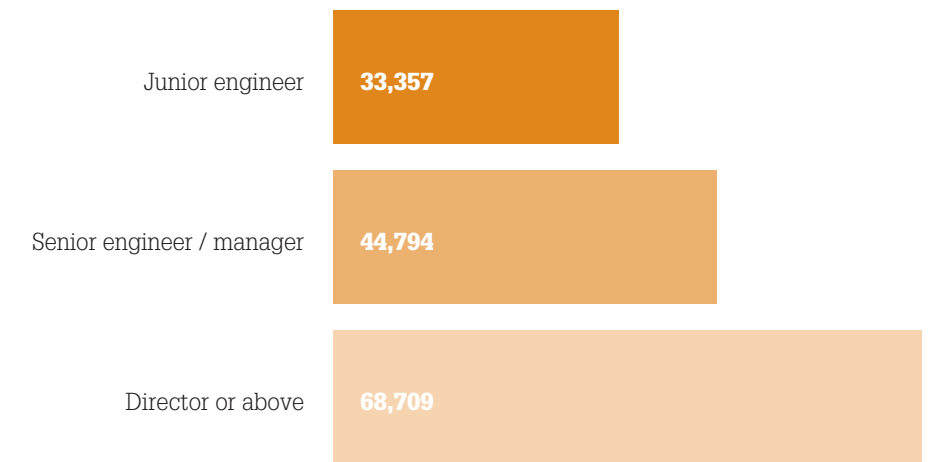
**06. automotive**

The UK's automotive industry is in excellent health, and while there are no major British-owned carmakers left, Britain now makes — and exports — more cars now than it has at any time. Unsurprisingly, therefore, engineers employed primarily by the automotive sector account for a large proportion of respondents to the survey (13.6 per cent) Perhaps more surprising is the fact that salaries in this buoyant sector didn't top the list of averages. Nevertheless, automotive engineers responding to the survey earn an average of £48,953, marginally more than the

“ **The UK's buoyant automotive sector accounted for the survey's largest sample group. Unsurprisingly, salary and satisfaction levels are relatively high**

figure for all engineers at £45,055, and roughly in the middle of the table when compared alongside other sectors. Unsurprisingly the largest group of respondents from this sector (39.1 per cent) are based in the Midlands and East Anglia. London and the South East is the next biggest regional employer, with 17.5 per cent of those surveyed based in this area. Engineers working in London and the South East earn the highest wages on average in the automotive industry, at around £51,333 and are closely followed by those based in Midlands & East Anglia, who earn on average £47,330. Those based outside of the UK take home the lowest salary, earning an average of £34,974. The sector sees the same kind of seniority-related seniority jumps observed in other sectors, with junior engineers taking home on average £33,357, whilst those at director level or above can expect to earn in the region of £68k. Automotive compares favourably with all other sectors, and sits around the middle of the table for each level of seniority. Satisfaction levels in the sector are in line with those across engineering, with half of the automotive engineers surveyed happy in their job, and 34 per cent content with their salaries. The overwhelming majority - 97 per cent - of respondents are male, and 90 per cent are white. The average age of automotive engineers is 44, although the largest group of those questioned - 17.3 per cent - are between 50 and 54 years old.

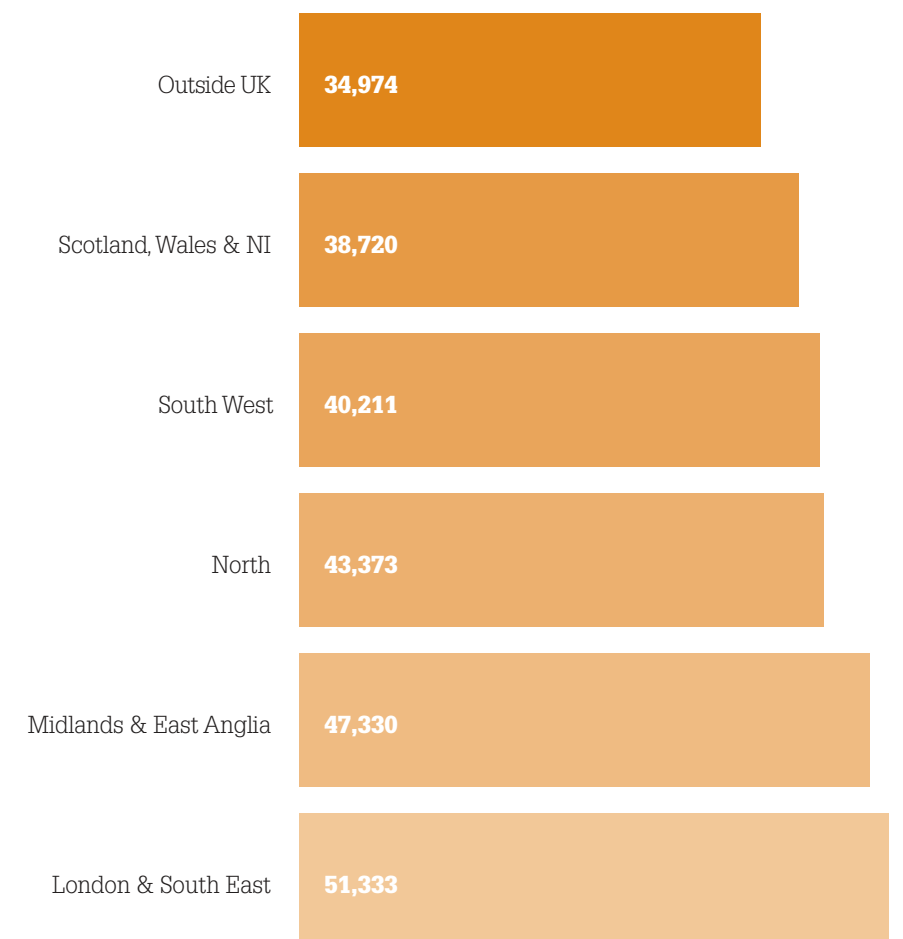
**average salary by seniority**



£44.8k

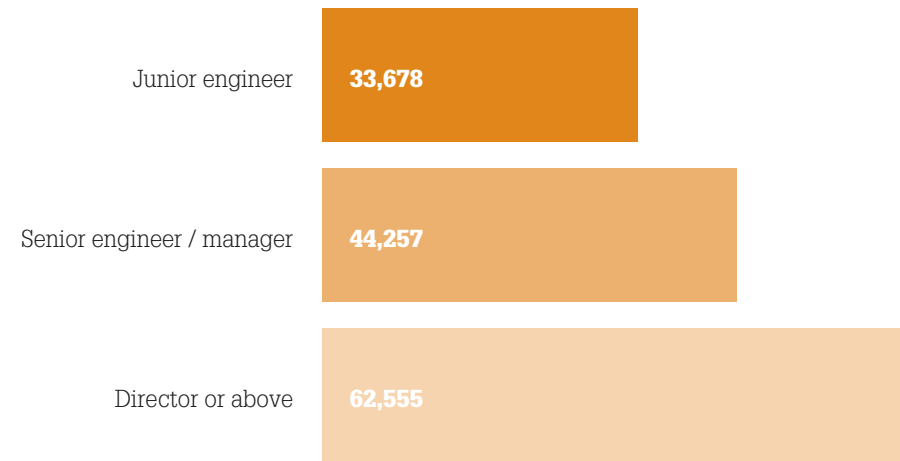
The average salary of senior engineers or above working in the automotive sector

**average salary by region**





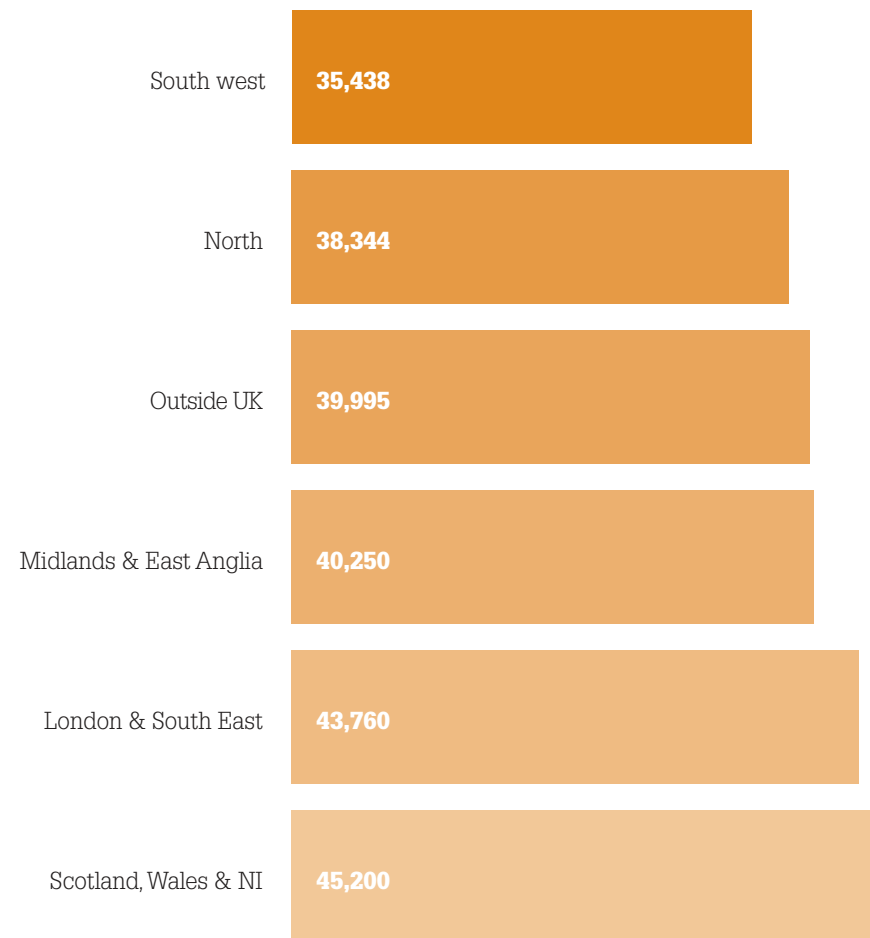
average salary by seniority



£44.3k

The average salary of senior engineers working in the rail / civil and structural sectors

average salary by region



07. rail / civil & structural

Despite turbulent times during the recession, the UK's rail, civil and structural engineering industry is now on the receiving end of billions of pounds worth of investment in new infrastructure projects. As a result, engineers working in the sector frequently find themselves working on some of the UK's most iconic flagship projects.

The average salary in the industry is £46,830, which puts it below many other sectors, including automotive, aerospace and oil and gas. And perhaps as a result of this the sector

“Salaries in the civil and structural sectors are only just above average, and satisfaction levels are relatively low. However, the industry boasts the healthiest diversity credentials

boasts mixed satisfaction levels. 39.4 per cent of respondents say they are happy with their salaries, which puts the sector near the top of the table.

However, the same percentage say they are happy in their jobs, which, when compared to the results from other sectors, is relatively low. As a result 52.1 per cent report that they are considering a change in job, which puts the sector behind just the food and drink and the chemical and pharmaceutical sectors.

That increases to £45,200 for civil engineers working in Wales, Scotland and Northern Ireland, while those in the South West earn significantly less, on £35,438.

The largest single group of respondents (27.7 per cent) are based in London and the South East where the average salary is £43,760. However, the highest average salary (£45,200) for the sector is found in Scotland, Wales and NI which accounted for 7.5 per cent of responses from civil, rail and structural engineers.

Respondents are evenly spread across the seniority levels, and the differences in salary for junior, senior and director level engineers are roughly in line with those seen elsewhere in industry.

Although the industry is perceived by many to be very male-dominated, civil and structural engineering has a significantly better gender balance than of any of the other sectors surveyed, with women making up 15 per cent of its engineering workforce. It is also the most multi-cultural sector, with 26 per cent of those surveyed describing themselves as non-white, compared to eight per cent for engineering as a whole. The average age is 40.

08 materials

The UK's materials sector is a diverse and highly innovative area of industry, spanning new developments in metallurgy, advanced lightweight composites, and emerging materials such as graphene.

Advances made in the sector are key to the success of other areas of industry, particularly the automotive and aerospace industries, where new materials are helping to meet stringent global emissions targets by reducing weight, and improving efficiency.

Engineers working in the materials sector accounted for 4.2 per cent of all responses to the salary survey, and earn, on average, £46,798.

“Respondents working in the UK's diverse materials sector earn just above the industry average. However, the sector's most generous salaries are found outside the UK

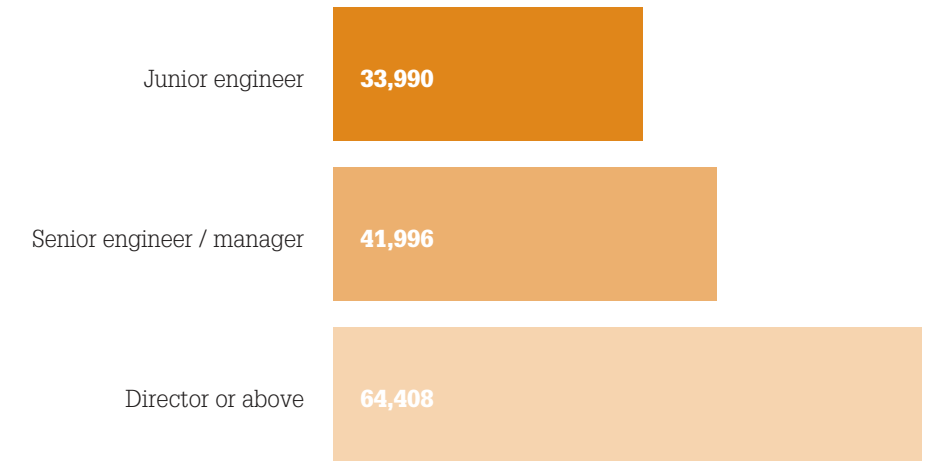
According to the survey, the highest average salaries in the sector are found outside the UK (£46,414), followed closely by the North of England (£44,422) and then London and the South East (£44,355). The poorest performing region is the South West (£33,125). This is a surprising result given the huge amount of materials – and particularly composites - expertise that can be found in this region, and could potentially be explained by the relatively small size of the sample group for the sector in this region.

Of the materials engineers we surveyed, 59 per cent are happy in their jobs, 39 per cent are satisfied with their salaries, and 84 per cent expect to stay in engineering for at least the next five years.

The average age of engineers in the sector is 44, with 91 per cent describing themselves as white. The sector boasts a better than average gender balance, with females accounting for 10 per cent of responses.

In line with other sectors, many of those responding believe that the biggest issue industry faces has to do with industry and knowledge. 29.6 per cent of respondents feel that action on the gender gap should be a priority for industry.

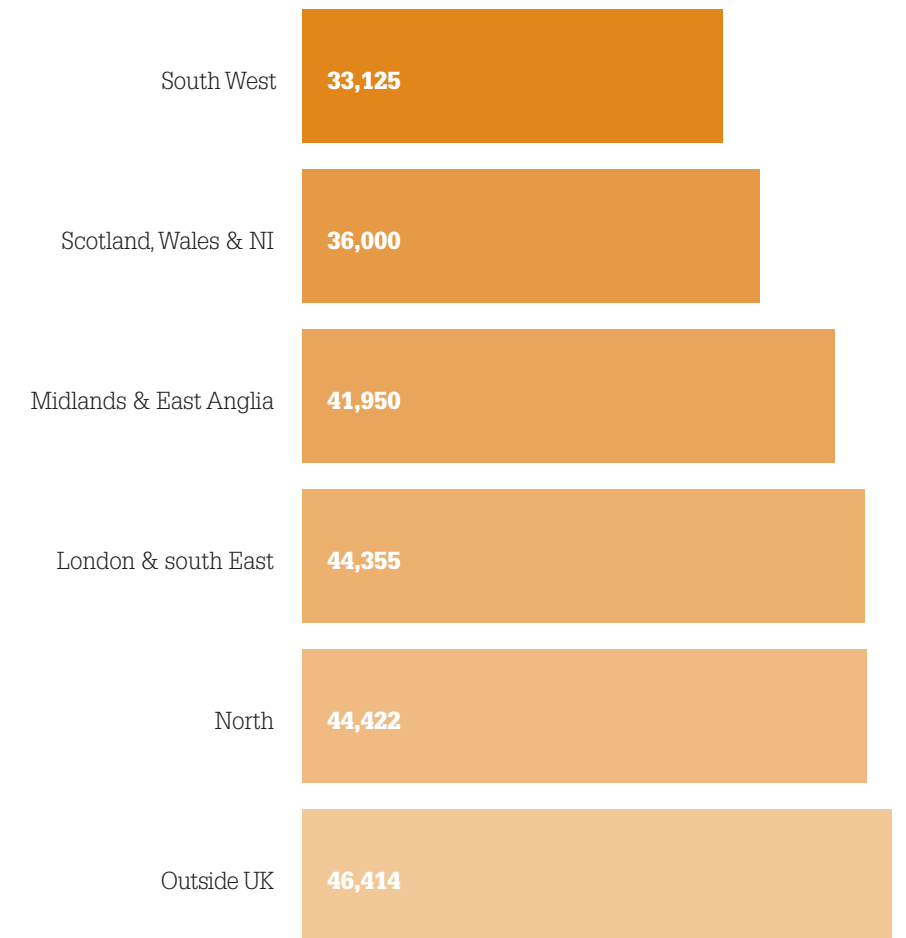
average salary by seniority



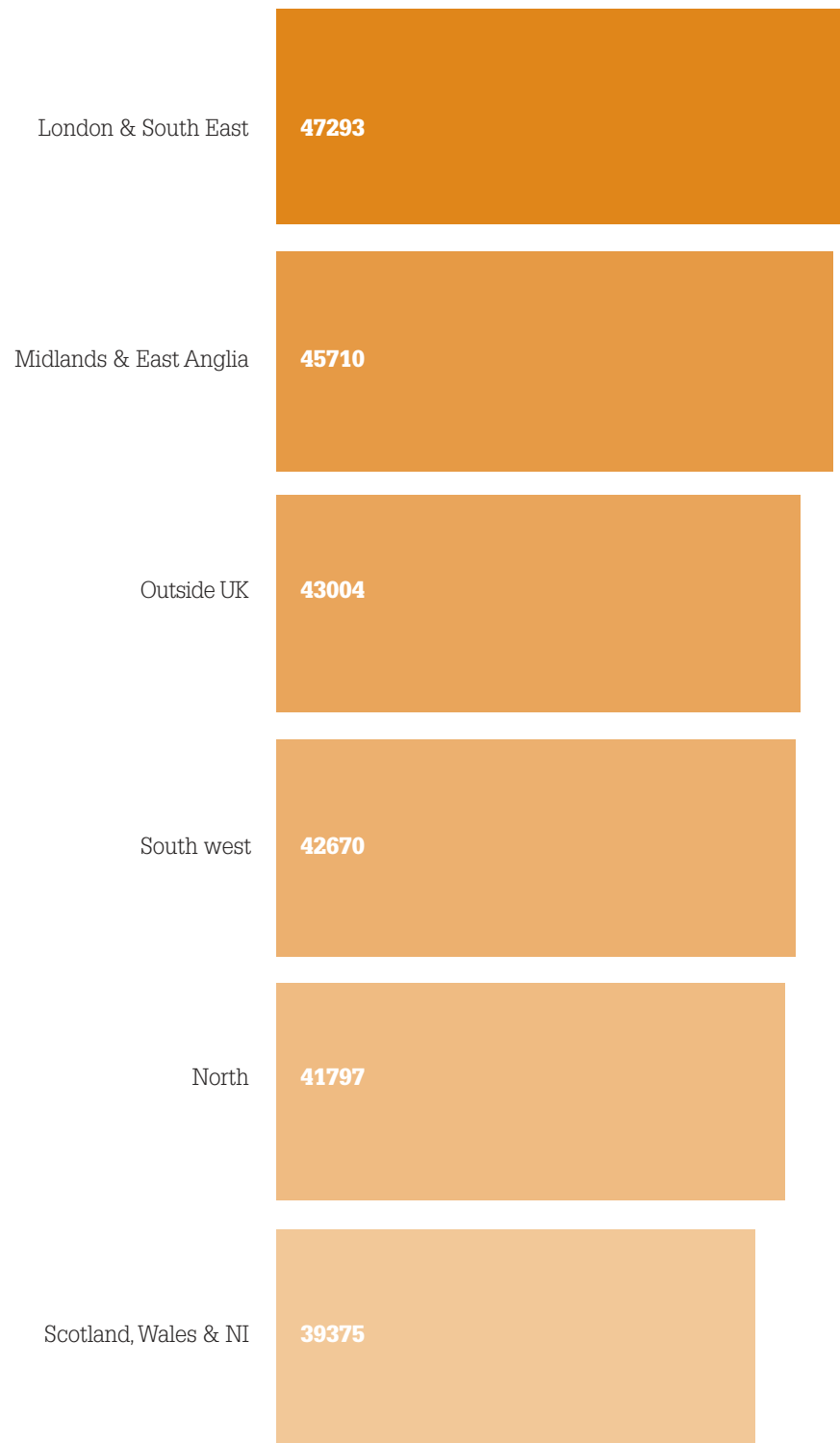
£41.9k

The average salary of senior engineers or above working in the defence and security/marine industries

average salary by region



**salary** by region



**£47.3k**

Average telecomms, utilities & electornics salary in London & South East

**09. telecoms and utilities / electronics**

There may not be any British electronics companies with household names to rival the likes of Apple, Samsung or Sony, but the UK does house the largest consumer devices manufacturing sector in Europe.

According to the results of our survey, the average salary for engineers in the field - which accounts for 8.4 per cent of our total response is £46,489, which is just above the average salary for all respondents and places the sector above the medical, academic and Food & Drink / consumer goods fields.

Responses come from across the UK, and although London and the South East represents the largest grouping (24.9 per cent), the

“**Engineers in these sectors accounted for 8.4 per cent of our overall sample group. Salaries in the sector are just above average, but satisfaction levels appear to be relatively low**

Midlands (12.4 per cent) and the South West (14.3 per cent) are also well represented.

Telecoms and electronics engineers working in London and the South East command the highest salaries, at around £47,293, while those in Wales, Scotland and Northern Ireland earn the least, at £39,375.

Whilst the average salaries for senior and director level engineers compare favourably with other sectors, junior engineers working in the field appear to be, on average, the most poorly paid junior engineers in industry, earning just £26,790. Unsurprisingly, the major factor driving engineers in the sector to consider other opportunities is a better salary. However many also report a desire to engage with a new challenge as a big motivating factor.

Perhaps unsurprisingly, this translates into fairly poor satisfaction levels across the sector with only 28.7 per cent of respondents happy with their salary and more than half (55 per cent) considering a change of job.

The average age of engineers working in this sector is, at 45.2, slightly above the broader industry average and 94.7 per cent of respondents are male. 87.9 per cent of those surveyed describe themselves as white, and just over 10 per cent as black, Asian or multi-ethnic.

Wider attitudes to the sector reflect concerns raised in other areas of industry. 52.9 per cent of respondents feel that lack of industry knowledge is an issue that needs addressing, whilst 28.3 per cent consider action on industry's gender gap to be important.

**10. medical**

The UK's thriving medical technologies industry consists of thousands of small and medium-sized companies, developing new devices and treatments for the healthcare market.

This is partly because inventing world-changing medical technology is a fast-moving and costly business and there's always a risk your new device might never make it through clinical trials. However, small companies are also much quicker when it comes to creating jobs. And the UK's medtech sector has experienced a boom in recent years, growing 6.6 per cent in 2012 compared to the 0.2 per cent growth in the wider economy.

Around a quarter of the engineers working in the industry are based in the South East of England. The average salary in the sector is

“**The UK's fast moving medical sector has been tipped for greatness and has experienced a boom in recent years. Salaries are just above average but satisfaction levels are particularly high**

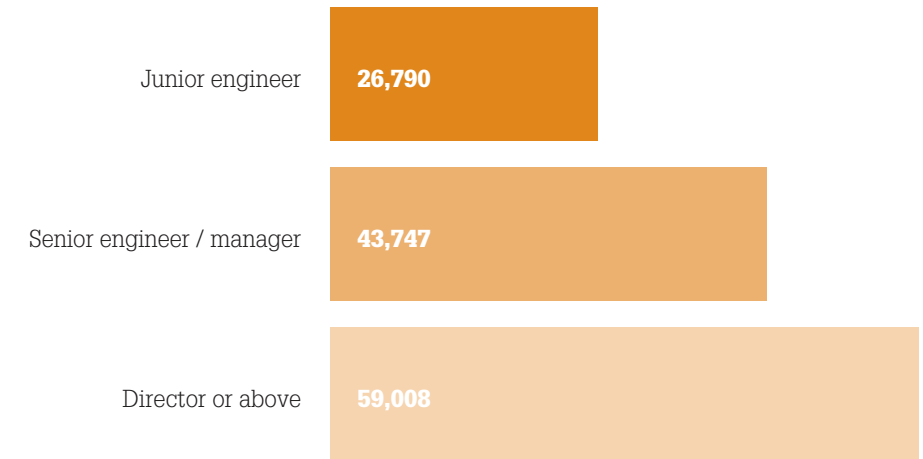
£44,379, and 47 per cent receive a bonus.

Once again, engineers working outside the UK can expect to earn the highest wages, taking home £48,757 on average. That compares to £39,299 for medical engineers in Wales, Scotland and Northern Ireland. The second-highest average salaries are found in the South West (£45,769)

Half of the engineers in the sector said they were happy in their current jobs, and 36 per cent are satisfied with their salary. Just 48.3 per cent are potentially considering a change of job, which is lower than every other sector apart from Defence & Security and materials.

Of the engineers surveyed, 92 per cent are male, and the same percentage describe themselves as white. The average age is 43.

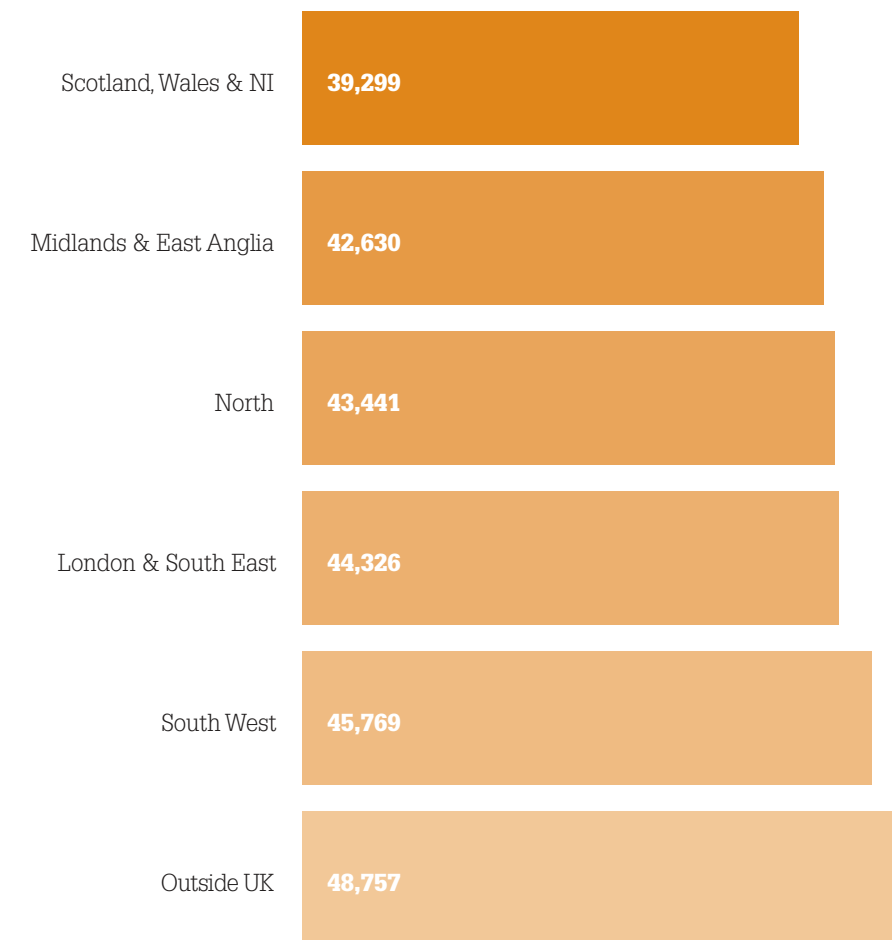
**average salary** by seniority



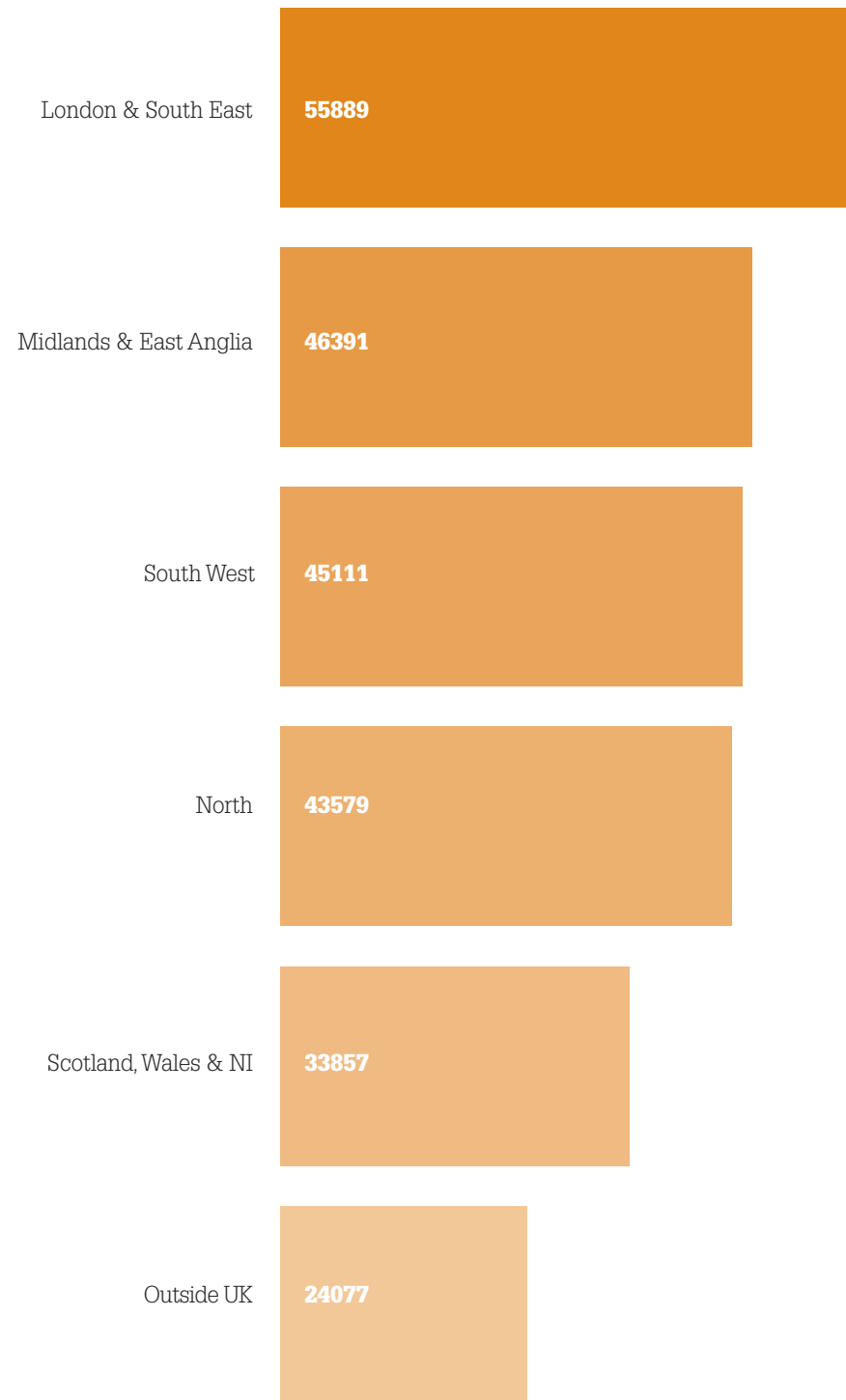
**£43.7k**

The average salary of senior engineers working in the medical industries

**average salary** by region



## salary by region



# £55.8k

The average salary of engineering academics in London & South East

## 11. academia

The UK's engineering research leads the world in its productivity, thanks to the vital collaboration between industry and academia.

Engineers working in academia account for a relatively low percentage of respondents (just 2.7 per cent) but the findings nevertheless provide interesting insight into the remuneration and satisfaction levels in this critical area.

The average salary of engineers in academia is £43,290 although this rises significantly to £55,889 for those based in London and the South East.

Academics based overseas earn the least, on average, at around £24,077.

“Salaries for engineers in academia are lower than average, and whilst half are happy in their jobs, many feel overworked”

Just 6 per cent of engineers in academia receive a bonus on top of the salary, by far the lowest proportion in our survey. Academics are also the most likely to feel overworked and undervalued by their employers, although around half are happy in their jobs overall.

### Employer focus

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## 12. food & drink/ consumer goods

The food and drink industry is the UK's largest manufacturing sector, with 15 per cent of the country's production output, while demand for consumer goods is likely to increase as the economy improves.

Engineers working in these sectors account for 6.9 per cent of the overall survey response.

The average salary for engineers working in the food and drink / consumer goods sectors is £42,082, the lowest amongst all of the groups sampled in the survey.

Overall, engineers working in the two industries earn the highest wages in London

“Engineers working in these sectors account for 6.9 per cent of overall response. Average salaries are low, as are satisfaction levels, with 52.6 per cent considering a change of job”

and the South East, at £44,654, while those based overseas earn the least, with an average salary of £36,041.

Seniority-based salary variation is unspectacular when compared with other sectors. Whilst those at director level or above are earning an average of £53,150, junior engineers are only just over £20k behind them on £30,209.

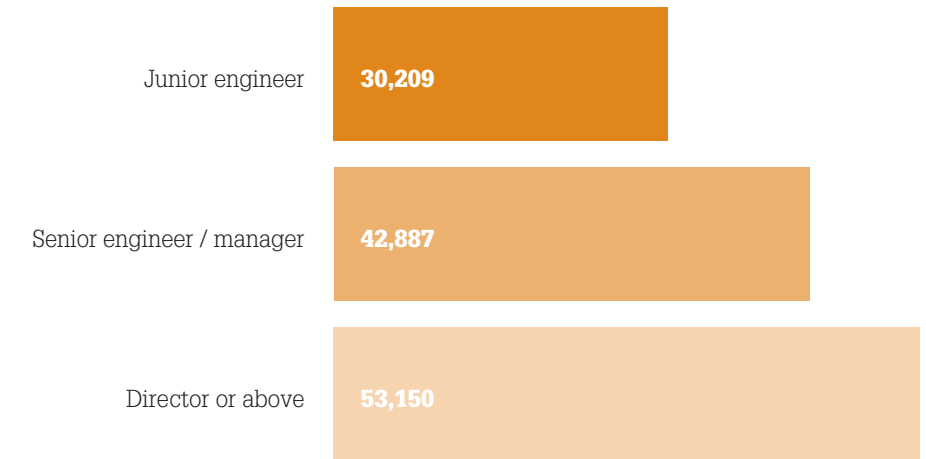
Unsurprisingly, given the relatively low salaries, engineers working in this group are some of the least satisfied with their salary. Just 29.1 per cent say they are happy with their level of remuneration.

Given the importance of salary to all of those who responded to the survey, these sectors perform relatively poorly in most of the other measures of satisfaction. 46.2 per cent of respondents say they are happy in their current roles, and 52.6 per cent say they are considering a change of job. Only the telecoms / utilities and electronics sectors have a greater percentage of potential leavers.

The sector features one of the worst male to female gender ratios amongst all of the surveyed sectors with female engineers accounting for just 1.5 per cent of respondents. Just under a quarter of those surveyed believe that the gender divide is an issue requiring attention, so there is perhaps some hope that the balance may improve in the future.

On a more positive note, the sector is more ethnically diverse than some others, with 7.8 per cent of respondents coming from black, Asian or multi ethnic backgrounds. Interestingly, at 2.9 per cent, the sector boasts one of the highest proportions of black engineers of all groups surveyed.

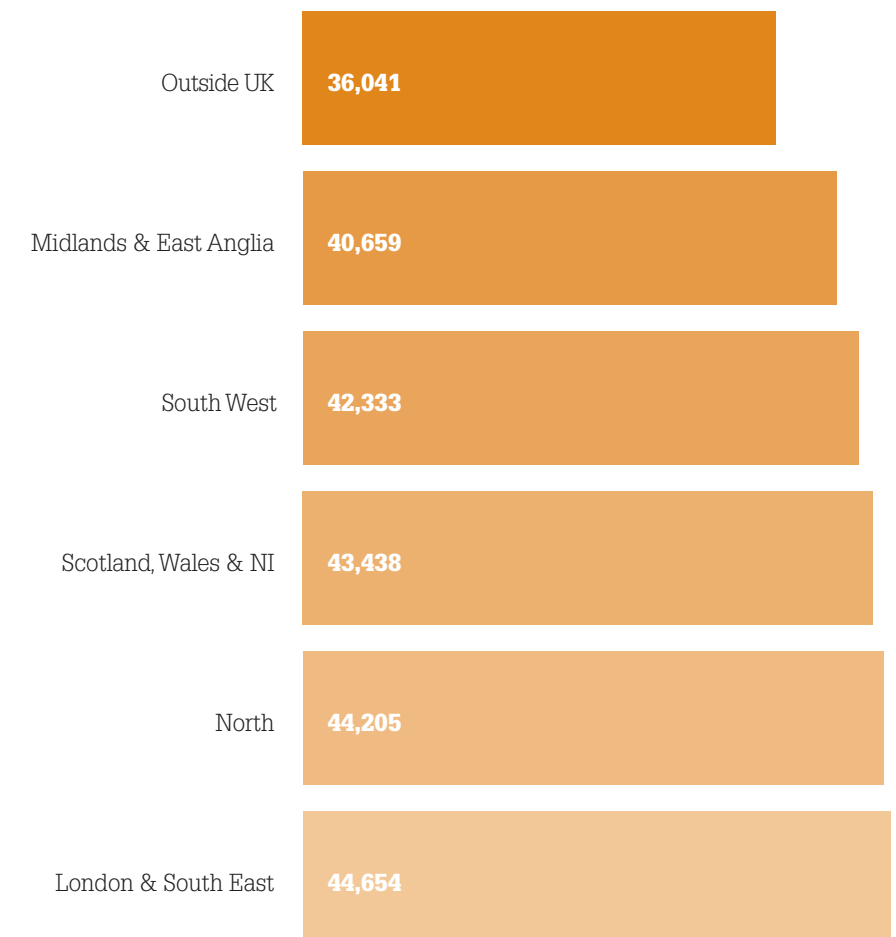
## average salary by seniority



# £42.9k

The average salary of senior engineers working in the food & drink / consumer sectors

## average salary by region

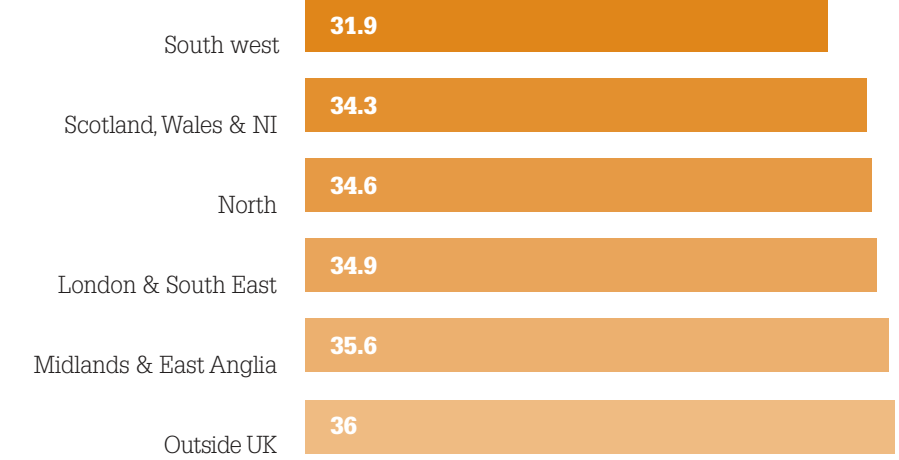




Sector	Average salary (£)	Average age	Percentage content with salary	Percentage happy in current job	Percentage considering change of job	Percentage likely to stay in industry for five years	Percentage that feel valued in current role	Percentage that do not feel valued
Oil and gas	55,265	42	46.9	57.1	46.5	86.1	45.9	26.1
Energy / renewables / nuclear	54,405	42.6	39.3	57	50.1	86.4	45.8	26.6
Defence and security / marine	53,151	43.1	28.5	53.6	43	89.9	42.3	30.5
Aerospace	51,283	42.2	31.9	50.2	49	84.6	37.9	31.2
Chemicals and pharma	49,887	45	42.2	48.3	52	87.1	37.4	28.6
Automotive	48,953	44	34	48.7	49.4	84.7	40.5	30
Rail / civil and structural	46,830	40.1	39.4	39.4	52.1	85.7	42.6	23.9
Materials	46,798	44.2	38.8	59.4	44	84.4	46.9	23.1
Telecoms / utilities / electronics	46,489	45.2	28.7	41.7	55	80	40.7	28.3
Medical	44,379	43.1	35.9	51	48.3	80	38.6	24.8
Academia	43,290	45.5	36.1	48.5	48.4	85.6	33	38.1
Food and drink / consumer goods	42,082	44.1	29.1	46.2	52.6	85.7	37.8	31.9

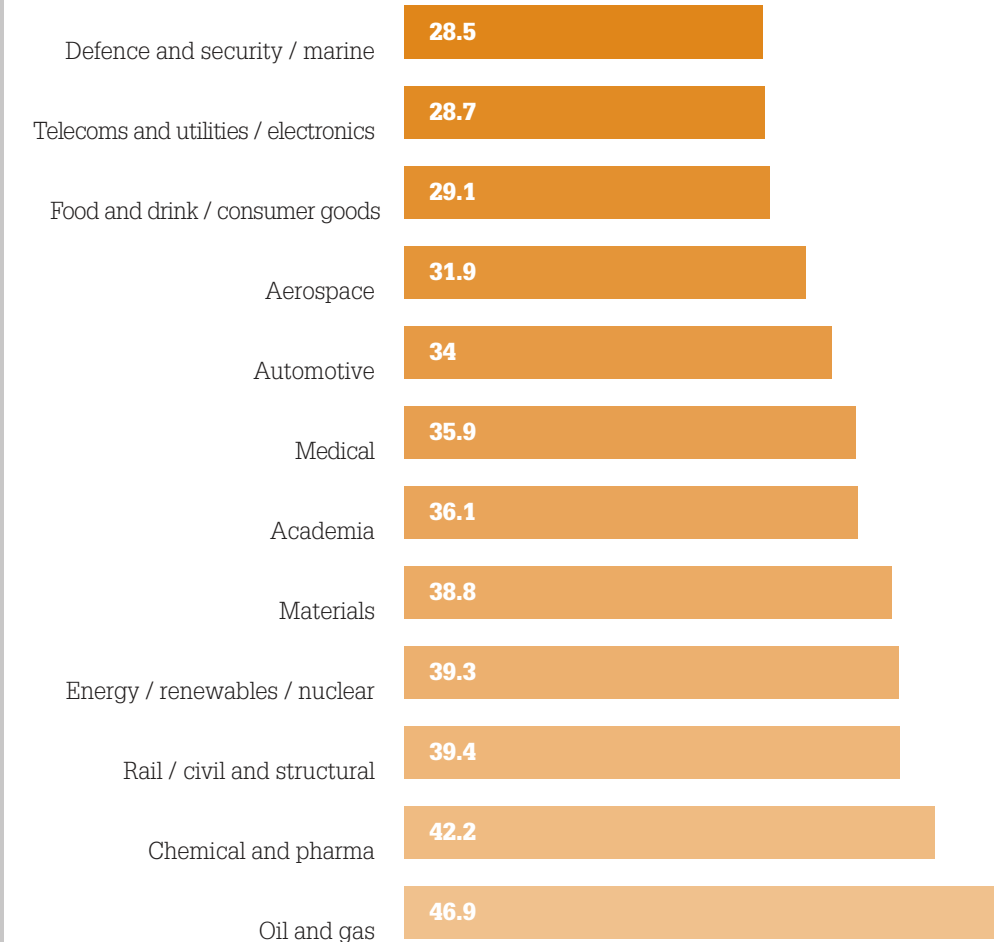
## percentage happy with salary

by region



## percentage happy with salary

by sector



## 01. job satisfaction

Despite some well-documented gripes – particularly around salary issues – UK engineers are a moderately satisfied bunch when compared with other industries. More than 50 per cent of respondents state that they are happy in their jobs, almost half are comfortable with their workload, and around a third feel that they are underpaid.

Scottish engineers have the greatest sense of job satisfaction, while those in the South West of England are most likely to complain about their salary, according to the survey.

Around half of all the engineers who responded to the survey say they are happy in their current job, but only 35 per cent feel that their earnings suitably reflect their workload.

Across the UK, 41 per cent of engineers in the North East of England say they are happy with their salary, compared to only 32 per cent in the South West. And while 57 per cent of Scots are happy in their jobs, only 21 per cent of Welsh engineers feel the same way.

Overall, male engineers appear to be marginally happier with their lot than their female counterparts, with a slightly greater percentage satisfied with both their jobs and pay. This perhaps reflects the substantial pay gap between the men and women surveyed.

Despite this, marine engineers are also the most likely to be unhappy with their pay, with 49 per cent discontented with their earnings compared to an average of 35 per cent. This

compares with engineers in the oil and gas industry, where 47 per cent are happy with their salary, against an average of 35 per cent.

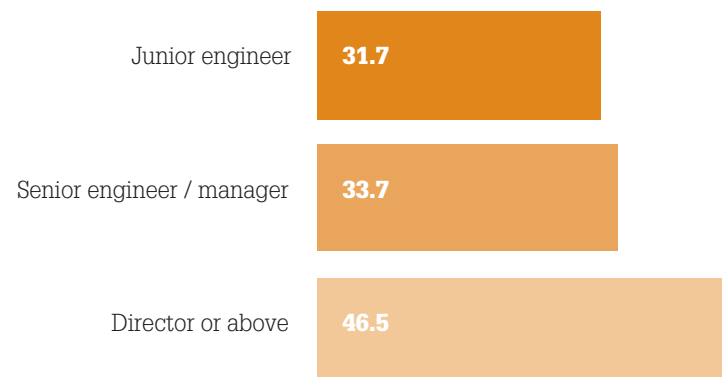
Engineers working in the materials sector enjoy their work more than those in other sectors, with 59.4 per cent happy in their current jobs. This sector is closely followed by oil and gas, where 57.1 per cent of respondents say there are happy in their current jobs. Engineers in the materials sector are also the most likely to feel valued by their employers (46.9 per cent). Again, the sector is closely followed by oil and gas, where 45.9 per cent say they feel valued, and the energy / renewables / nuclear sectors where 45.8 per cent feel valued.

But spare a thought for those engineers

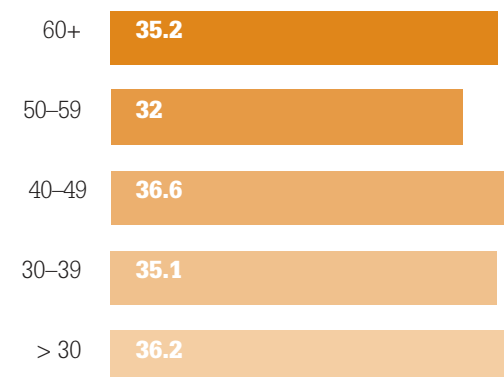
working in academia, who were most likely to be unhappy with their workload, and to feel undervalued by their employers (38.1 per cent)

As well as their own immediate concerns, respondents were also asked about wider issues, and which skills or attributes they consider to be lacking in the engineering industry. Just over half (50.9 per cent) cite industry knowledge as an attribute that is lacking in the sector today, whilst 37.3 per cent say that a lack of communication skills is an issue that needs addressing. Interestingly, professional qualifications appear to be less of a priority issue, with just 15 per cent of respondents saying that industry falls down in this area.

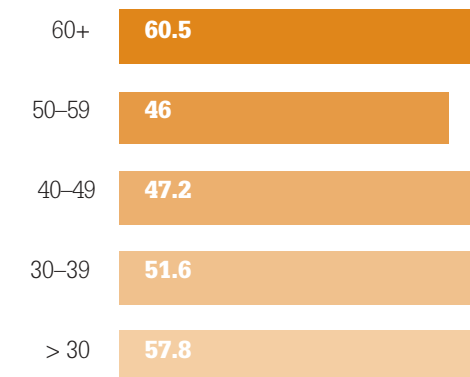
### % happy with salary by seniority



### % happy with salary by age



### % happy in job by age



## 02. change of job / leaving industry

Despite the satisfaction and salary concerns reported in the previous section, respondents are a fairly settled bunch it would seem.

The vast majority of those surveyed – 84 per cent – expect to remain in engineering for the next five years, and only 7 per cent are likely to leave within that time.

Of those engineers that are considering a change of profession, most cite the need for a fresh challenge as the reason for their itchy feet, whilst those hankering after a change of job within industry are more likely to be motivated by a better salary.

Amongst the different sectors, engineers in the defence & security / marine sector are

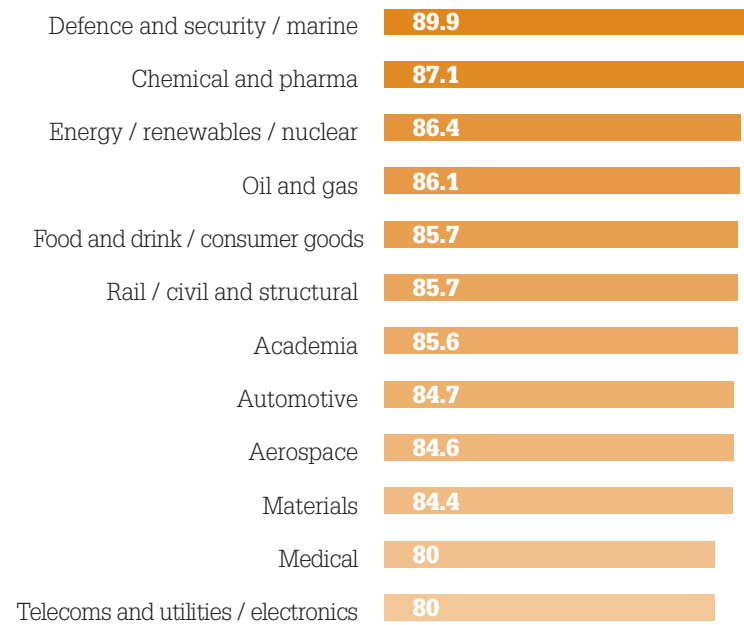
most likely to remain in industry for the next five years (89.9 per cent) whilst those working in the medical and telecommunications, utilities and electronics sectors are apparently the least settled, with 80 per cent saying they will definitely stay in industry for the next five years.

When it comes to moving around within the industry, around half of engineers are content to stay in their current position, while 41 per cent are considering a new job. Perhaps unsurprisingly, the biggest motivator for those looking for a new role is a desire for a better salary, with 68 per cent of those interested in a change of post citing it as their main reason for doing so.

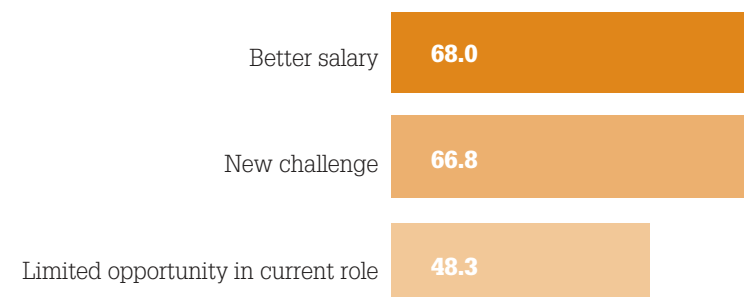
Once again, engineers in the defence, security & marine sectors appear to be the least likely to want to move, whilst 57.3 per cent of those from the food & drink / consumer industries are considering a change of sector.

Although similar percentages of men and women are considering a change of job, a higher percentage of women are considering moving out of engineering altogether. A lack of opportunities for flexible working, which is often cited as one of the main reasons for the shortage of women in industry, is given as a factor by around a third of female engineers wishing to leave the profession. For women wanting to switch jobs salary is the main factor.

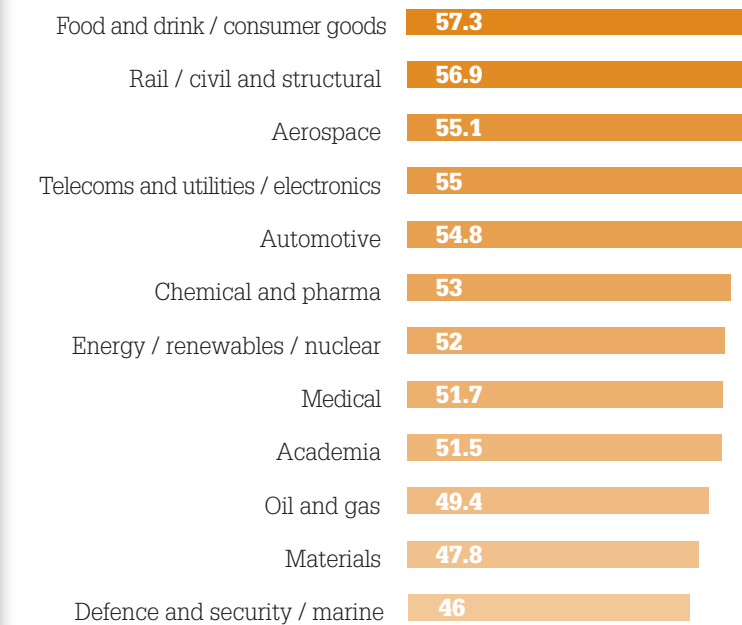
### % likely to remain in industry (next 5 years) by sector



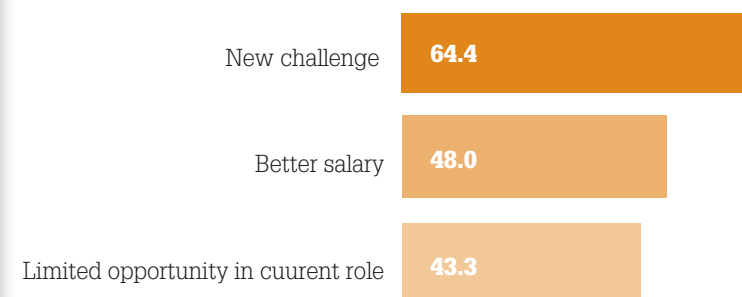
### top 3 motivations for considering a change of job within industry (%)



### % considering a change of job by sector



### top 3 motivations for considering a change of job outside industry (%)



## 03. benefits & bonuses

If you are looking for an engineering job that is likely to come with a bonus on top of your salary, head for the chemicals & Pharmaceuticals sector, where 62 per cent of respondents receive an annual bonus.

On average just under half of engineers across all sectors receive a bonus, but as well as chem & pharma the various energy sectors all perform particularly well. The worst performing sector is academia, where just 6 per cent of respondents say that they receive a bonus.

There is some variation across the seniority levels, with senior engineers / managers most likely to receive a bonus (48.4%) and junior engineers least likely to benefit (38.5%)

	% receiving private medical insurance	% benefitting from flexible working
oil and gas	53.2	27.7
food drink & consumer	46.7	21.4
materials	43.5	17.3
medical	42	28
automotive	41.1	22
aerospace	36.6	40.6
rail civil & structural	35.9	29.7
energy, nuclear & renewables	35.4	35.1
defence security & marine	28.3	44.1
academia	7.2	32

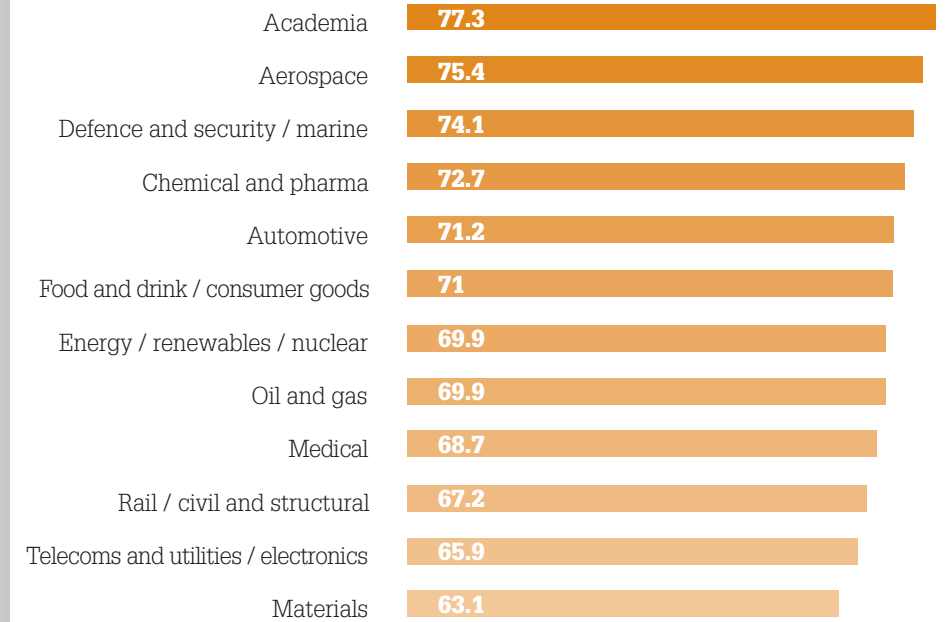
A total of 80.9 per cent of respondents have some form of pension with 70.9 per cent enjoying the benefits of a contributory pension. Once again, there is some variation across the different sectors, with engineers from academia most likely to be enrolled on contributory schemes (77.3 per cent) and those in the materials sector least likely (63.1 per cent)

Of the other perks engineers receive, 40 per cent benefit from private medical insurance and 28.9 are able to make use of flexible working arrangements.

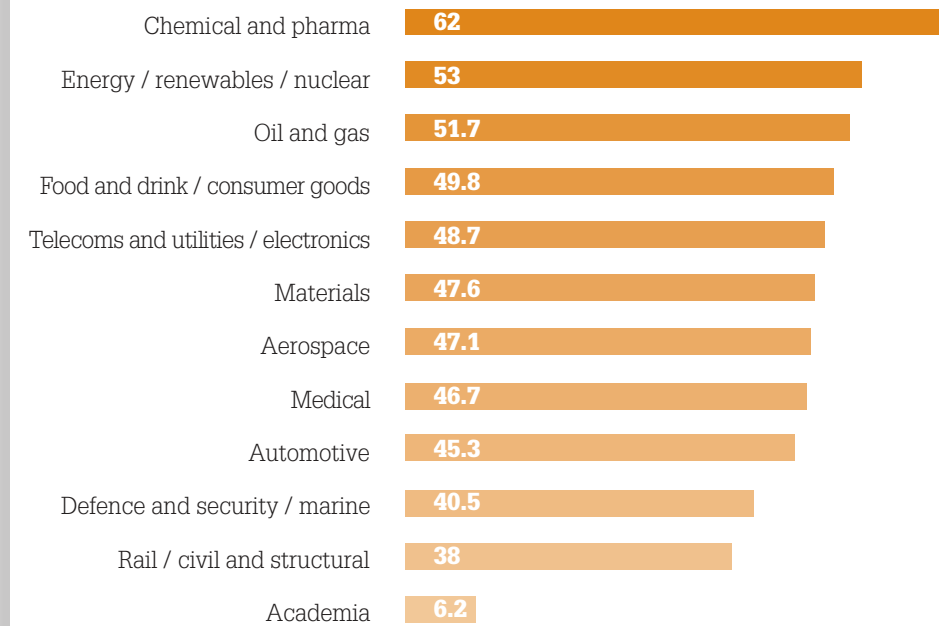
Unsurprisingly, engineers in academia have the longest holidays of each of the sectors, with around three quarters benefitting from more than 26 days paid leave. This compares sharply with the food and drink industry, where only a quarter receive the same amount of paid holiday.

It's not all bad news for those in the food and drinks industry though, as they are also the second-most likely to receive private medical insurance, with 54 per cent of engineers in the sector benefitting from the perk.

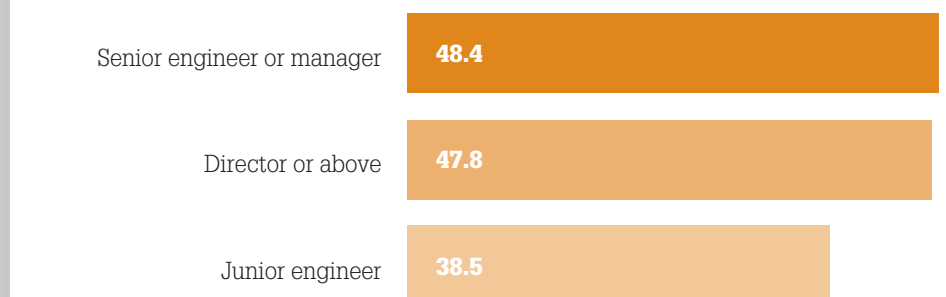
### % receiving contributory pension by sector



### % receiving bonus by sector



### % receiving bonus by seniority



## 04. routes into industry

When it comes to getting into engineering, whether through apprenticeships or a degree, there is a significant age divide.

The younger generation, on the whole, favour the university route. Engineers between the ages of 30 to 39 are most likely to have a degree, with 56.9 per cent of respondents entering the industry in this way. This group is closely followed by the under 30s, where 55.1 per cent of respondents entered industry via the degree route.

These two age groups are the least likely to have undertaken an apprenticeship, with just 23.5 per cent of under 30s and 25 per cent of under forties having chosen this route.

At the other end of the age scale over 60 per cent of all engineers between 60 and 69 entered the profession via an apprenticeship, and just over half of those between 50 and 59 took the same route.

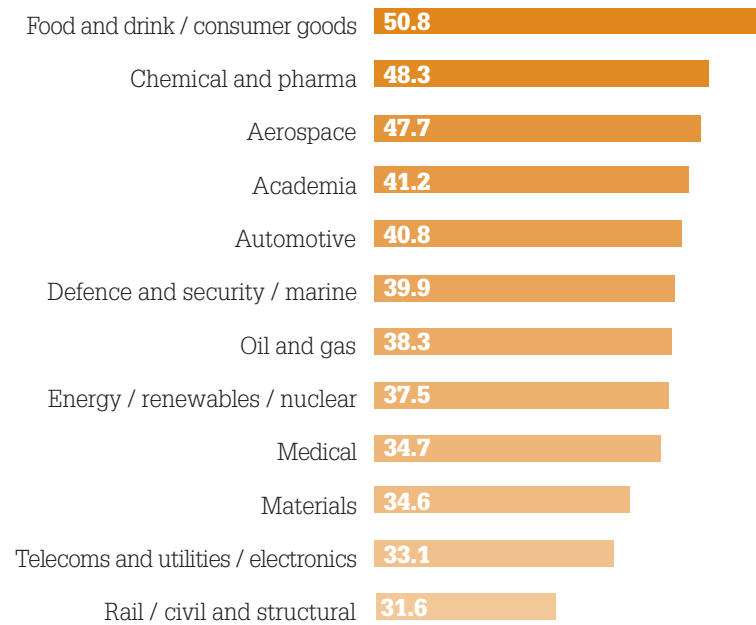
The food and drink industry has the highest proportion of engineers who have undertaken an apprenticeship, with 50.8 per cent, which compares to an average of 41 per cent for the profession as a whole. Automotive and aerospace, two of the UK's largest and most established sectors also fare well, with 40.8 per cent and 47.7 per cent respectively qualifying via an apprenticeship. The lowest percentage of apprenticeship-qualified engineers can be

found in the rail / civil & structural sectors where just 31.6 per cent of respondents entered industry in this way.

Meanwhile, the energy, renewables and nuclear sectors boast the highest proportion of engineers with degrees, with 56.2 per cent of respondents qualifying via this route. These sectors are closely followed by Chemicals & Pharmaceuticals, telecoms and utilities and medical. Somewhat surprisingly given its close links with the academic research base, the lowest percentage of degree-qualified engineers (43.2%) is found in the materials sector which also has a relatively low-level of apprentice-qualified workers (34.6%).

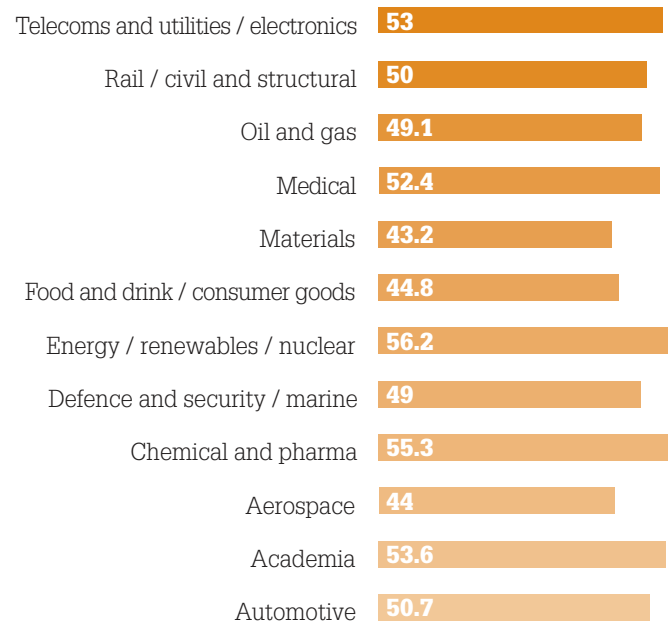
### % qualified by apprenticeships

by sector

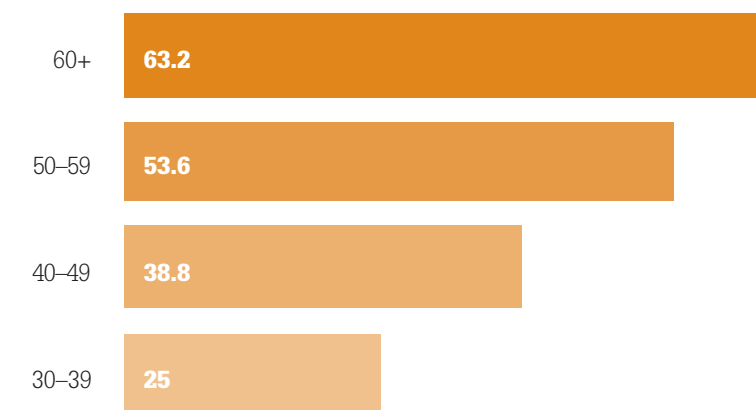


### % qualified by bachelor / hons degree

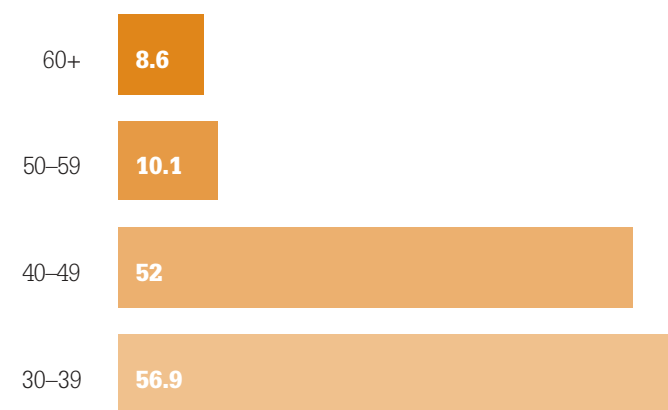
by sector



### % apprenticeships by age



### % degrees by age



## 05. professional registration

Despite the concerted efforts of the various engineering bodies to encourage engineers to pursue professional registration, only a third of respondents have done so.

In general the percentage of professionally registered respondents increases the higher up the pay scale an engineer sits and well over half of those earning £51k or above are registered.

However, this figure drops off further down the pay scale with 30.7 per cent of those earning between £31 and 50k registered, and less than a quarter of those earning less than £30k opting to pursue registration.

There is also some variation in levels of professional registration from sector to sector.

There are, for instance, relatively high levels of registration amongst respondents from the energy, process and civil sectors, but low levels in other areas such as food, drink and consumer goods where just 24.6 per cent are registered. This is perhaps an interesting measure of the degree to which the perceived value of registration varies across industry.

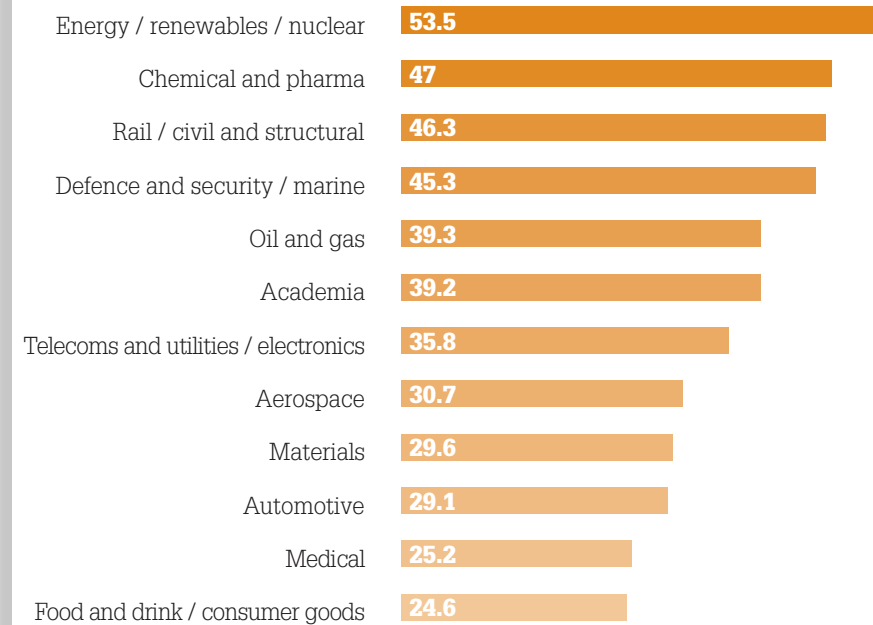
Neither age nor gender seem to play a role in determining whether an engineer is professionally registered, with more or less equal percentages of engineers from each of the age brackets, and equal proportions of men and women, choosing to follow this path. There is however, some disparity when it comes to

ethnicity, with 39.7 per cent of Black, Asian, minority ethnic (BAME) respondents choosing registration, compared to 35.3 per cent of white respondents. There appears to be much greater value attached to professional registration amongst BAME respondents with 29.7 per cent agreeing with the statement that it leads to a higher salary (compared to just 16.9 per cent of white respondents).

Perception of the value of registration also rises with seniority (this is unsurprising given the greater levels of registration higher up the career ladder) with roughly a quarter of those at director level also agreeing that it leads to higher salaries.

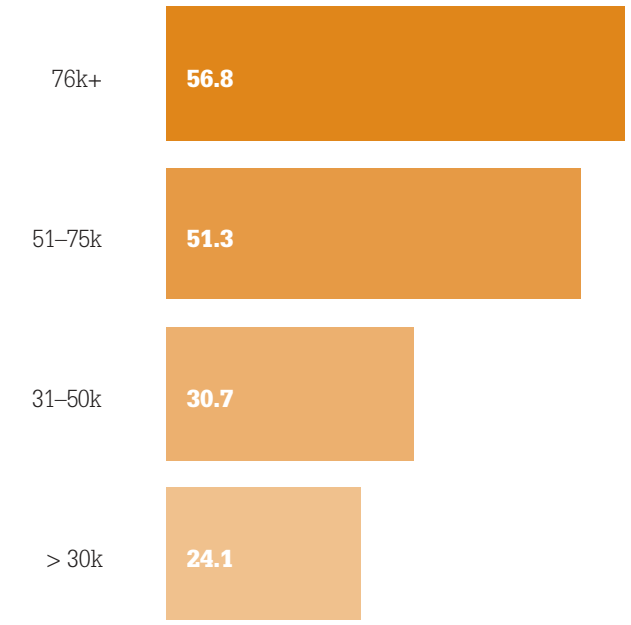
### % professionally registered

by sector

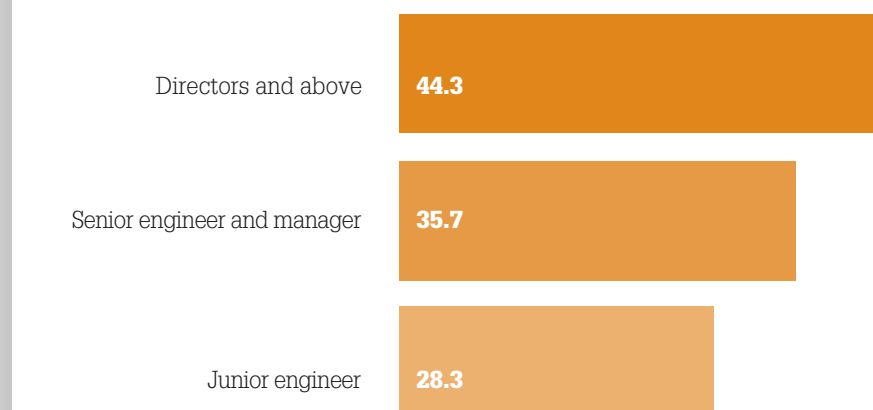


### % professionally registered

by salary

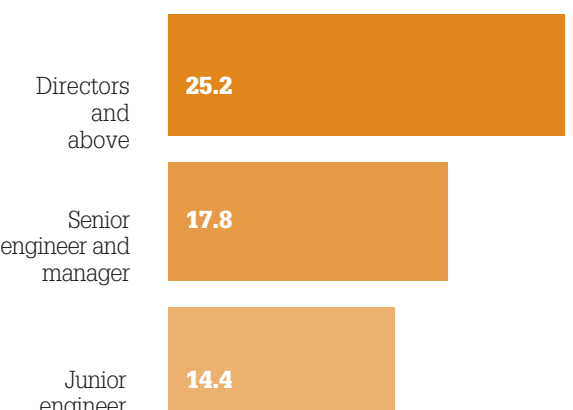


### % professionally registered by seniority



### % agree professional registration leads to higher salary

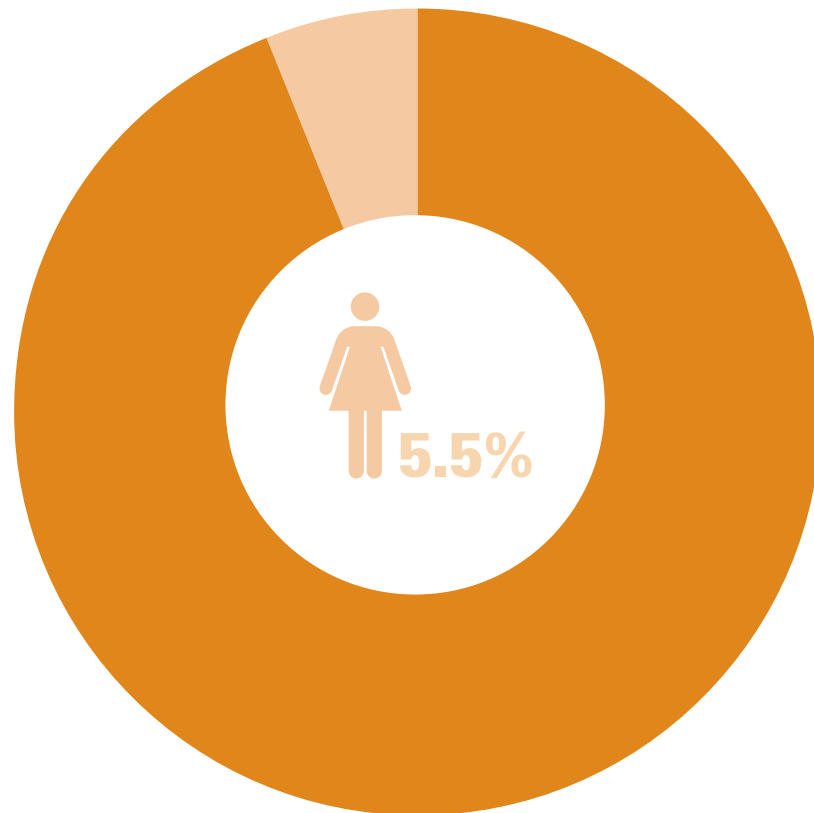
by seniority





gender split

 **94.5%**



average salary by gender



06. gender & diversity

Addressing industry's gender imbalance continues to be a major priority across all engineering sectors, and our survey results provide a reminder of why this is such an issue – with women making up just 5.5 per cent of our respondents, a figure which echoes other external snapshots.

In the individual sectors, the industry that appears to be doing the best job of attracting women is civil and structural engineering, where 15 per cent of the professional workforce are female. This is followed by the materials sector, in which 10 per cent are female.

At the other end of the spectrum, however, less than one per cent of engineers in the

**Overall women account for just 5.5 per cent of respondents. Female respondents earn on average £10k less per year than their male colleagues**

consumer goods sector are women.

So why is there still such an enormous gender gap in engineering, despite all the hard work of the various bodies to encourage more women into industry?

Despite the striking difference in average salaries (women engineers responding to the survey earn almost £10,000 less than men) it's unlikely that pay is the key issue here. Indeed, this disparity is explained by the higher proportion of men in senior positions (24.4% of female respondents described themselves as junior engineers, compared to just 12% of the males who took part)

What's more, the problem does not appear to be primarily one of job satisfaction, since the women we questioned were only marginally less likely to be happy with their pay and role than their male counterparts.

It also cannot be explained by women leaving the profession to start a family, since the highest proportion of female engineers are in the early thirties age band, at 19 per cent. This is closely followed by women in their late twenties (18 per cent) and late thirties, (13 per cent).

The number of female engineers appears to drop sharply as women enter their early fifties, an age band that in contrast has the highest proportion of male engineers surveyed.

This perhaps suggests that efforts to encourage more women into the profession in recent years are starting to bear fruit, even if much more work is needed.

Promisingly, it appears to be an issue that a large number of engineers agree needs addressing, with more than a quarter of respondents agreeing that the gender gap is an important issue.

Industry's ethnicity gap is a less-widely

discussed issue, but is equally pronounced. Overall, 89.9% of respondents describe themselves as White, and just 7.3% as BAME (Black, Asian and minority ethnic).

These findings are broadly in tune with other sets of statistics. Indeed, according to the Office for National Statistics (ONS) Labour Force Survey, whilst ethnic minorities make up 24% of first degree qualifiers, they make up only 6% of those working in engineering occupations.

As shown there is however some marked variation in these percentages across the different sectors. For instance, whilst just 2.8 % of respondents from the Chemical and Pharmaceutical sector define themselves as BAME the Civil & Structural / Rail sectors boasted a far healthier figure of 17.5%.

Across the board, respondents defining themselves as Asian account for the largest group of non-white respondents overall (4.6%). However, in some sectors this is particularly marked. Indeed, in the automotive, aerospace, chemical & pharmaceutical, and energy sectors no respondents describe themselves as black. This would appear to reinforce concerns that industry has historically been particularly poor at engaging with the UK's Afro-Caribbean communities.

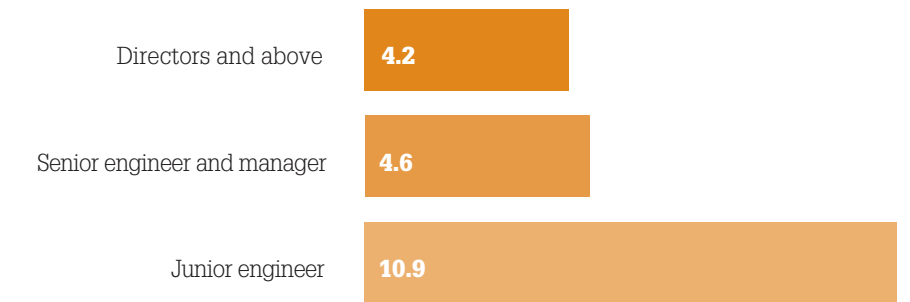
In salary terms BAME respondents fare less well than white engineers. The average salary

**Industry's ethnicity gap is equally marked with just 7.3 per cent of respondents describing themselves as black, Asian or minority ethnic. The civil and structural / rail sector boast the highest levels of diversity across the board with a 15 per cent response from women, and 17.5 per cent from BAME groups**

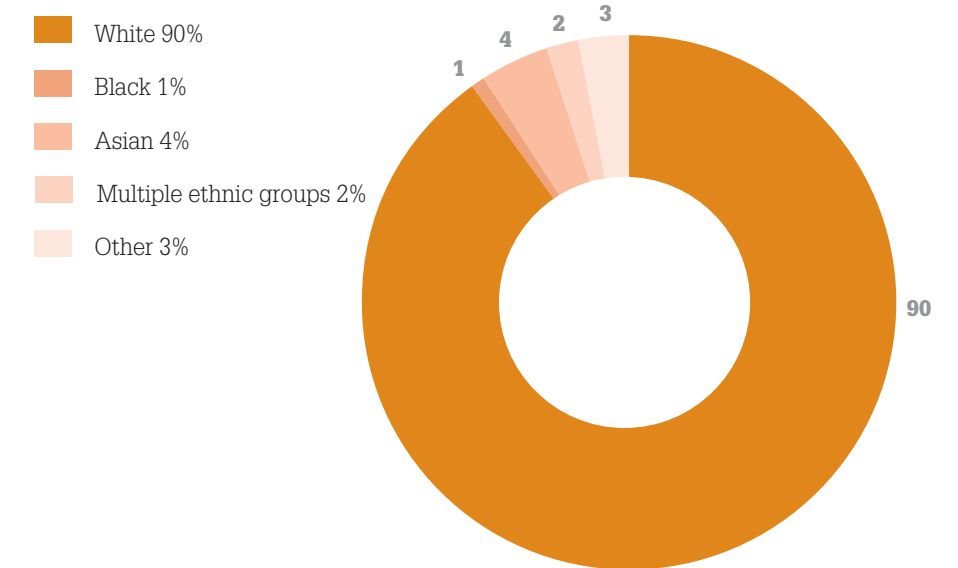
for a white respondent is £47,880. For BAME respondents it is £39,195. This is at least partly explained by a lower proportion of senior engineers in the BAME grouping. 87.2% of white respondents are at senior engineer level or above, whilst 73.5% of BAME respondents fall into this category.

Interestingly, whilst many respondents agree that action on the gender divide is important, fewer regard the ethnicity balance as an issue, with just 7.6% of respondents flagging it as a priority concern.

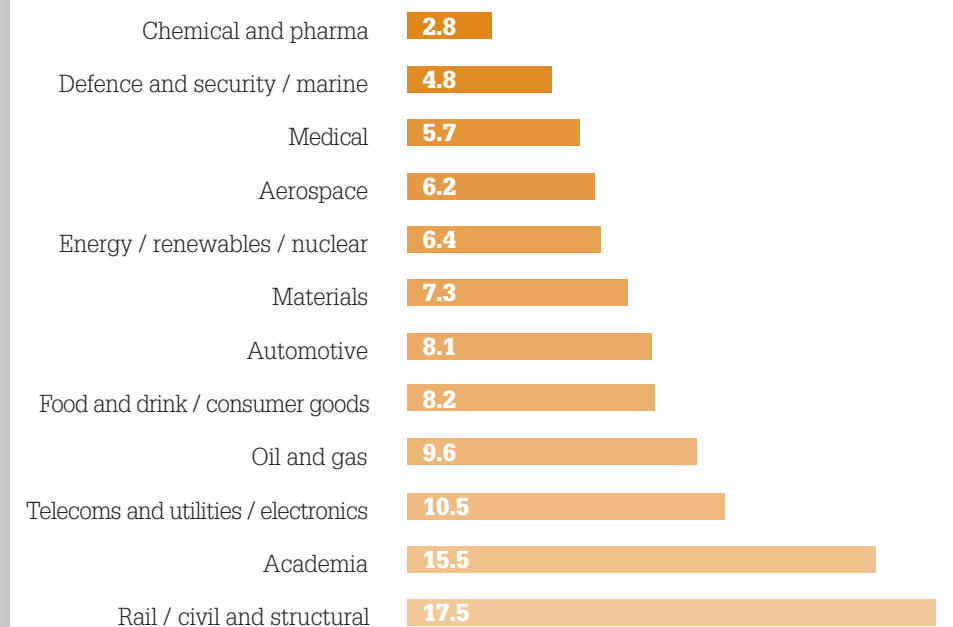
% women by seniority



% industry's ethnic diversity

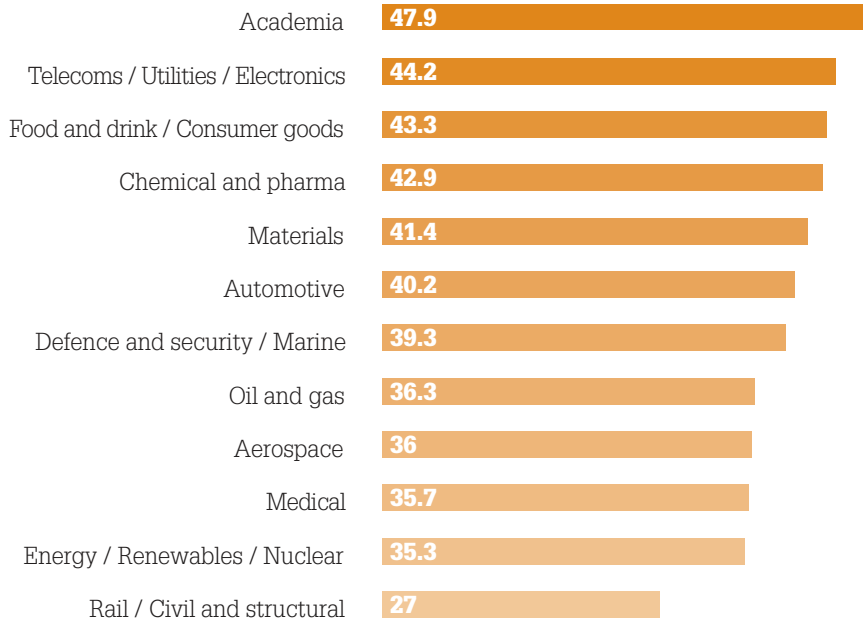


% BAME (black, asian, minority ethnic) by seniority



## 07. age

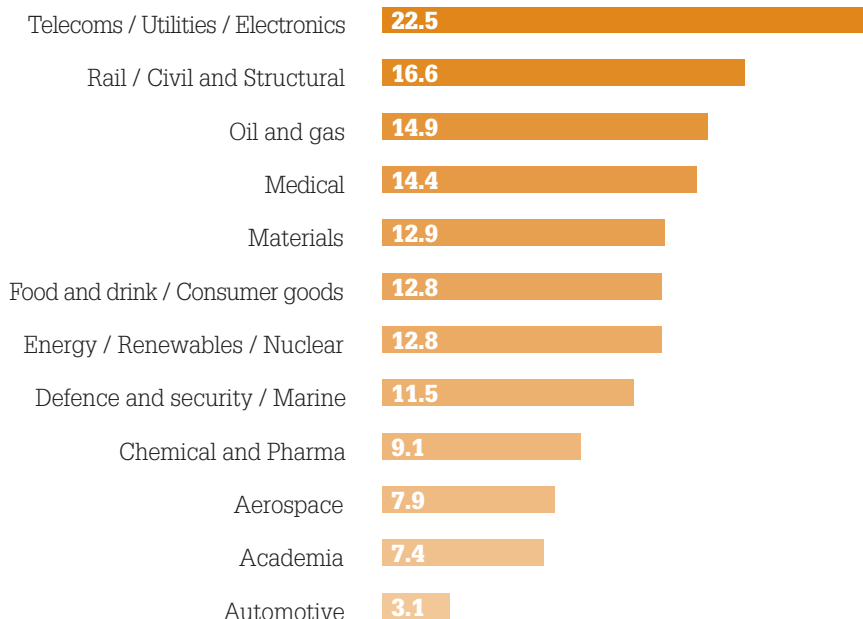
### % engineers over 50 by sector



# 44

Average age of respondents  
to The Engineer's 2015 salary survey

### % engineers under 30 by sector



The ageing nature of the UK's engineering workforce has been the subject of significant debate in recent years, with many concerned that the impending retirement of many of our most highly-skilled and experienced engineers could lead to crippling skills shortages in a number of key sectors.

But here our survey offers some cause for optimism. Of those questioned, the average age of engineer is 44. Engineers in the civil and structural engineering sector are the youngest on average, at 40, while the oldest in the profession can be found in the process industry, with an average age of 45.

These averages hide a slightly more worrying trend though, since more engineers can be found in the 50-54 age band (16.6 per

**“ The average age of a survey respondent is 44, however more engineers can be found in the 50 - 54 age bracket than any other, reinforcing the importance of inspiring a new generation to take up industry's baton**

cent) than any other, suggesting that many will be retiring over the next ten years. Meanwhile, at the other end of the spectrum, just 12 per cent of the engineers we surveyed are under 30.

There is some variation by sector. As the chart shows, in a number of key sectors – such as automotive and chemical and pharmaceutical – more than 40 per cent

Age	Salary
<b>Under 30s</b>	<b>31,443</b>
<b>30 – 39</b>	<b>41,035</b>
<b>40 – 49</b>	<b>48,386</b>
<b>50 – 59</b>	<b>51,157</b>
<b>60+</b>	<b>54,583</b>

of respondents are over the age of 50. Unsurprisingly, the civil sector boasts the highest proportion of younger engineers, with 22.5 per cent of respondents from the sector coming from the under 30s age group.

Interestingly, the energy, nuclear and renewables sectors, which are frequently reported as being particularly concerned about their ageing demographic fare pretty well. 12.8 per cent of respondents from these sectors are under 30, and just 35.3 per cent are over 50.

Average salaries appear to increase with age, which is perhaps unsurprising as there is a close association between age and seniority. Indeed, whilst Junior Engineers account for 16 per cent of respondents in the 30 – 39 age group, they only make up 3.2 per cent of the sample group in the 50 – 59 age bracket.