



Labour Market Intelligence Update Buckinghamshire

2018

Buckinghamshire
Thames Valley LOCAL ENTERPRISE
Valley PARTNERSHIP
THE ENTREPRENEURIAL HEART OF BRITAIN



**BUCKINGHAMSHIRE
BUSINESS FIRST**

**YOUR LOCAL
GROWTH HUB**



**BUCKINGHAMSHIRE
SKILLS HUB**



Welcome to our second LMI update

Today's young people and adults face tough competition for jobs, yet many employers report difficulties in recruiting people with the right skills. The working world has changed fundamentally over the past generation, creating an employment challenge caused by the demise of the job for life, the emergence of the knowledge economy and the loss of many unskilled and semi-skilled jobs due to technological and globalisation changes.

To compete successfully in a rapidly changing global economy, employers need a workforce equipped with a broad range of skills, knowledge and attributes. One which has the ability to think critically and is enterprising, innovative, adaptable, and self-motivated.

While it is difficult to predict the future labour landscape, awareness of local labour market intelligence, looking as far ahead as possible, can improve our understanding of the skills, qualifications and wider attributes that are needed for the future. Economies and policies change – so do students' aspirations and circumstances – so it is also important that the range of skills and attributes developed are transferrable and will enhance, and ultimately aim to future proof, everyone's lifelong employability.

On the 4th December 2017, the Government launched its long-awaited Careers Strategy which is part of the Government's plan to make Britain fairer, improve social mobility and offer opportunity to everyone. It is aligned to the recently published Industrial Strategy which focusses on building a Britain fit for the future by investing in the development of skills to meet the changing needs of business, increase productivity and drive growth across the country. The careers strategy aims to support

everyone, whatever their age to go as far as their talents will take them and have a rewarding career, and sets out a plan to achieve just that working closely with various stakeholders. Employers have an important part to play in supporting individuals to grow and develop.

BTVLEP's Buckinghamshire Skills Hub supports careers inspiration and skills development activities in schools and colleges in Buckinghamshire to improve the work preparedness of our young people by connecting businesses to educators and young people. Through its Enterprise Adviser Network, and OppsinBucks.org and WANNABEBucks.org platforms, it works across the majority of the secondary schools in the county and supported or facilitated over 52,000 student-employer encounters in 2016-17. Encounters encompass careers talks, skills development workshops, industry-led challenges and competitions, careers events, work place visits, and work placements.

The second Bucks Skills Show took place in October 2017, where 1700 young people came and interacted with a broad range of employers and listened to industry speakers from our key growth sectors which include creative industries, high performance engineering, space industries, life sciences, health and social care, and construction.

STEM (Science, technology, engineering and maths) skills often underpin these sectors and it is recognised nationally that "We have particular skills shortages in sectors that depend on STEM subjects, where we need more of these graduates to compete successfully in a global economy", according to HM Government (2017, 16) Building Our Industrial Strategy Green Paper. STEM jobs are expected to grow at double the rate of other occupations, creating 142,000 jobs between now and 2023. In particular, it is important to encourage more women to go into STEM occupations to not only address the skills shortages but to also work towards eliminating the gender pay gap. In response to this, we are currently piloting a Buckinghamshire Skills Hub and STEM Now initiative which sees our dynamic Enterprise Advisers partnered with STEM Ambassadors to ensure schools' employer engagement and career inspiration activities include a STEM focus.

We look forward to working with you to build a dynamic future workforce that meets the needs of industry in order to drive productivity and growth both in Buckinghamshire and beyond.

Jackie Campbell
Skills Development Manager
Bucks Skills Hub, BTVLEP

Buckinghamshire's labour market

Population:



534,700 people living in Buckinghamshire,



Projected to rise to by an average of 0.8 per cent per annum to reach **591,300** by 2030

Jobs:



242,000 people in employment in Buckinghamshire in 2016

Buckinghamshire has a strong economy, with 34,175 businesses and their 242,000 workers generating £16.1bn in Gross Value Added (GVA). Buckinghamshire's impact can be seen across the globe. The films and screen content produced at Pinewood Studios are famous the world over; innovations driven by motorsport technology from the Silverstone cluster are being adopted by business sectors from mining to aerospace; and the pioneering work at Stoke Mandeville Hospital led to the birth of the Paralympic movement and a realisation of the limitless potential of human achievement.

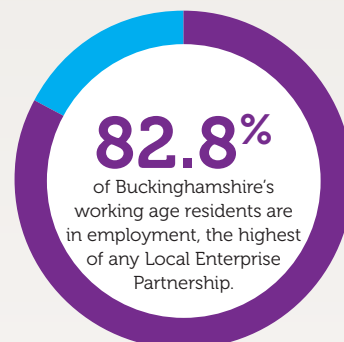
It is also an exciting time for Buckinghamshire located at the heart of the Oxford-Milton Keynes-Cambridge growth corridor which will bring extensive investment and opportunity to the county and adjoining Greater London. Our newly published growth strategy will seek to strengthen our existing world leading economic assets at Pinewood and Silverstone and build upon the potential of our Enterprise Zones to create growth in sectors such as the space propulsion industry where development in Buckinghamshire already allows Britain to lead the global race.

Table 1: Businesses, jobs and output in Buckinghamshire

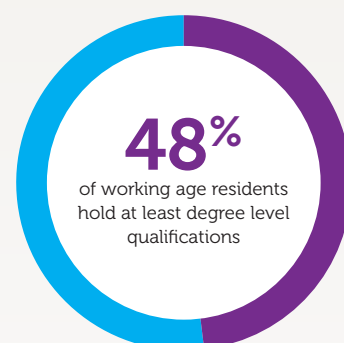
| | Enterprises | Jobs | GVA (£m) | GVA per job |
|-----------------|-------------|---------|----------|-------------|
| Aylesbury Vale | 10,525 | 77,800 | 4,911 | 63,123 |
| Chiltern | 6,560 | 36,200 | 2,702 | 74,641 |
| South Bucks | 5,530 | 38,500 | 2,690 | 69,870 |
| Wycombe | 10,455 | 89,500 | 5,794 | 64,737 |
| Buckinghamshire | 33,070 | 242,000 | 16,098 | 66,521 |

Sources: IDBR, ONS, 2017, BRES, ONS, 2017, Regional Accounts, ONS, 2017

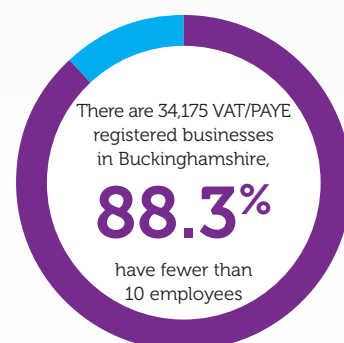
Employment:



Education:

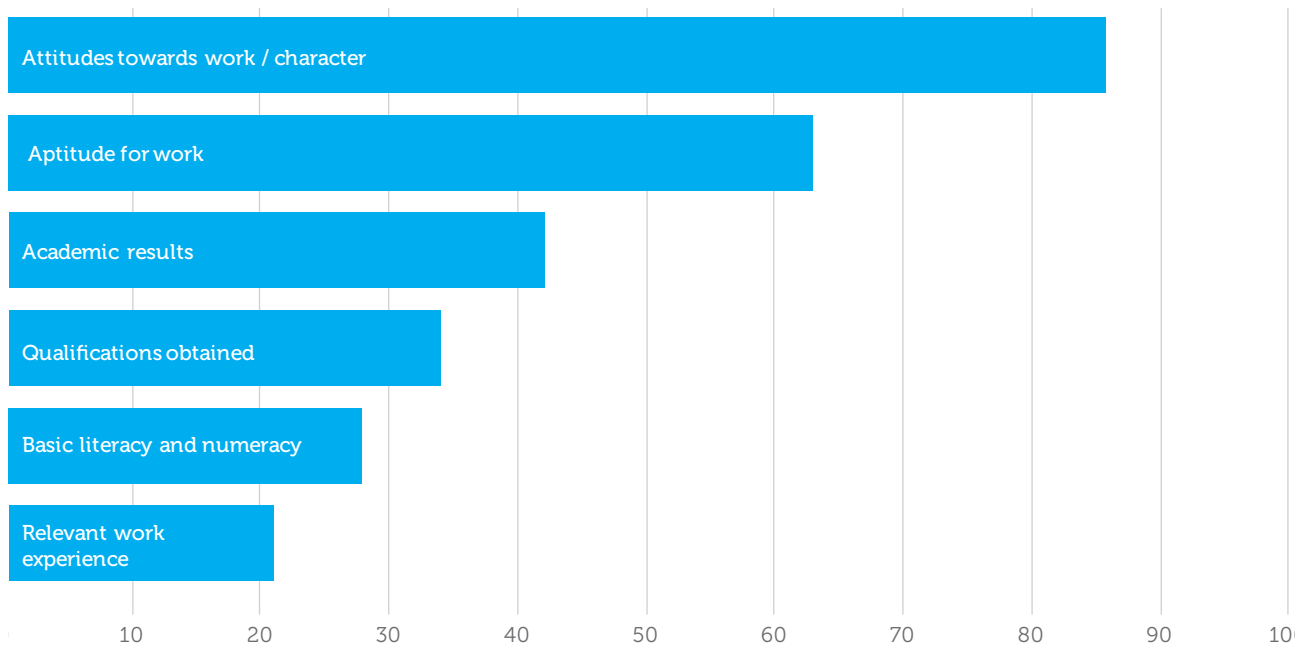


Businesses:



Local vacancy information

Chart 1: Most important factors in recruiting school / college leavers



Source: CBI & Pearson (2017) Education & skill survey

Table 2: Top locations of vacancies, year to end of August

| Town | Job openings 2016 | Job opening 2017 | % Change |
|--------------------|-------------------|------------------|----------|
| High Wycombe | 13,866 | 15,730 | 13.4 |
| Aylesbury | 11,471 | 12,174 | 6.1 |
| Marlow | 3,087 | 4,093 | 32.6 |
| Beaconsfield | 1,954 | 2,832 | 44.9 |
| Amersham | 2,425 | 2,797 | 15.3 |
| Buckingham | 1,880 | 2,058 | 9.5 |
| Gerrards Cross | 1,076 | 1,238 | 15.1 |
| Chesham | 1,085 | 1,237 | 14.0 |
| Bourne End | 842 | 862 | 2.4 |
| Iver | 556 | 751 | 35.1 |
| Princes Risborough | 328 | 385 | 17.4 |
| Buckinghamshire | 59,088 | 63,822 | 8.0 |

Source: Labour Insight, 2017



Table 3: Most sought skills, year to August 2017

| Specialised skill | Job postings no. | % | Baseline skill | Job postings no. | % |
|----------------------------|------------------|-----|-------------------------------|------------------|------|
| Customer Service | 5,284 | 8.3 | Communication Skills | 15,327 | 24.0 |
| Microsoft Excel | 5,091 | 8.0 | Organisational Skills | 8,873 | 13.9 |
| Business Management | 3,748 | 5.9 | Planning | 4,870 | 7.6 |
| Microsoft Office | 3,381 | 5.3 | Team Work/ Collaboration | 4,508 | 7.1 |
| Project Management | 3,124 | 4.9 | Detail-Orientated | 4,502 | 7.1 |
| Sales | 2,942 | 4.6 | Writing | 4,238 | 6.6 |
| Teaching | 2,872 | 4.5 | Problem Solving | 3,147 | 4.9 |
| Product Sales | 2,513 | 3.9 | English | 2,747 | 4.3 |
| Accountancy | 2,417 | 3.8 | Creativity | 2,657 | 4.2 |
| Contract Management | 2,182 | 3.4 | Leadership | 2,159 | 3.4 |
| Key Performance Indicators | 2,159 | 3.4 | Mathematics | 2,107 | 3.3 |
| SQL | 2,033 | 3.2 | Research | 2,020 | 3.2 |
| Budgeting | 1,990 | 3.1 | Computer Skills | 1,914 | 3.0 |
| Business Development | 1,966 | 3.1 | Time Management | 1,850 | 2.9 |
| Invoicing | 1,874 | 2.9 | Quality Assurance and Control | 1,624 | 2.5 |
| Customer Contact | 1,858 | 2.9 | Presentation Skills | 1,546 | 2.4 |

Source: Labour Insight, 2017

Many employers in Buckinghamshire who are keen to help young people develop these skills and understand business expectations can be contacted through the Opps in Bucks website - www.oppsinbucks.org.



Local vacancy information

Table 4: Most sought occupations in Buckinghamshire, year to end of August 2017

| Occupation | Job opening no. | % |
|--|-----------------|-----|
| Programmers and software development professionals | 2,655 | 4.2 |
| Business sales executives | 1,875 | 2.9 |
| Other administrative occupations n.e.c. | 1,832 | 2.9 |
| Nurses | 1,673 | 2.6 |
| IT user support technicians | 1,403 | 2.2 |
| Secondary education teaching professionals | 1,391 | 2.2 |
| Sales accounts and business development managers | 1,201 | 1.9 |
| Marketing associate professionals | 1,177 | 1.8 |
| Care workers and home carers | 1,129 | 1.8 |
| Web design and development professionals | 1,108 | 1.7 |
| Chartered and certified accountants | 1,094 | 1.7 |
| Managers and proprietors in other services n.e.c. | 1,047 | 1.6 |
| Book-keepers, payroll managers and wages clerks | 1,014 | 1.6 |
| Sales related occupations n.e.c. | 981 | 1.5 |
| IT business analysts, architects and systems designers | 925 | 1.4 |
| Human resources and industrial relations officers | 905 | 1.4 |
| Managers and directors in retail and wholesale | 885 | 1.4 |
| Chefs | 859 | 1.3 |
| Primary and nursery education teaching professionals | 833 | 1.3 |
| Finance and investment analysts and advisers | 817 | 1.3 |
| Customer service occupations n.e.c. | 772 | 1.2 |
| Sales Supervisors | 768 | 1.2 |
| Management consultants and business analysts | 666 | 1.0 |
| Vehicle technicians, mechanics and electricians | 661 | 1.0 |
| Marketing and sales directors | 640 | 1.0 |
| Financial managers and directors | 619 | 1.0 |
| Financial accounts managers | 613 | 1.0 |

Source: Labour Insight, 2017



Table 5: Vacancies by industry in Buckinghamshire, year to July 2017

| Industry | Job Postings no. | % |
|---|------------------|-----|
| Education | 4,198 | 6.6 |
| Human health activities | 3,912 | 6.1 |
| Food and beverage service activities | 2,454 | 3.8 |
| Social work activities without accommodation | 1,517 | 2.4 |
| Retail trade, except of motor vehicles and motorcycles | 1,371 | 2.1 |
| Legal and accounting activities | 869 | 1.4 |
| Wholesale and retail trade and repair of motor vehicles and motorcycles | 751 | 1.2 |
| Advertising and market research | 749 | 1.2 |
| Office administrative, office support and other business support activities | 682 | 1.1 |
| Accommodation | 652 | 1.0 |
| Real estate activities | 632 | 1.0 |
| Scientific research and development | 581 | 0.9 |
| Insurance, reinsurance and pension funding, except compulsory social security | 506 | 0.8 |
| Other professional, scientific and technical activities | 445 | 0.7 |
| Specialised construction activities | 443 | 0.7 |
| Activities of membership organisations | 438 | 0.7 |
| Residential care activities | 410 | 0.6 |
| Manufacture of food products | 373 | 0.6 |
| Land transport and transport via pipelines | 327 | 0.5 |
| Financial service activities, except insurance and pension funding | 326 | 0.5 |
| Wholesale trade, except of motor vehicles and motorcycles | 280 | 0.4 |
| Construction of buildings | 244 | 0.4 |
| Employment activities | 226 | 0.4 |

Source: Labour Insight, 2017

Table 6: Advertised salaries for openings in Buckinghamshire, year to end of August 2017

| Salary | Job postings no. | % |
|--------------------|------------------|------|
| More than £90,000 | 616 | 1.6 |
| £80,000 to £89,999 | 383 | 1.0 |
| £70,000 to £79,999 | 674 | 1.7 |
| £60,000 to £69,999 | 1,428 | 3.7 |
| £50,000 to £59,999 | 2,488 | 6.4 |
| £40,000 to £49,999 | 4,601 | 11.9 |
| £30,000 to £39,999 | 8,327 | 21.6 |
| £20,000 to £29,999 | 12,190 | 31.6 |
| £15,000 to £19,999 | 6,292 | 16.3 |
| £10,000 to £14,999 | 1,087 | 2.8 |
| Less than £10,000 | 526 | 1.4 |

Source: Labour Insight, 2017



Employment by sector to 2030

Employment in Buckinghamshire is forecast to rise by 8.5 per cent, or 24,000 jobs, between 2018 and 2030 at an average annual rate of increase of 0.8 per cent. Residential care and social work is forecast to have the strongest growth in both absolute and relative terms to 2030, both in Buckinghamshire and across the UK as a whole. In Buckinghamshire the sector's workforce is forecast to grow by 32.0 per cent to 17,700 in 2030.

Health, wholesale, accommodation and food service, professional services are forecast to see the next highest

growth in the number of jobs to 2030. Together these five sectors account for 64.1 per cent of all additional jobs in Buckinghamshire to 2030.

Construction employment is forecast to rise by 3,600 jobs (15.7 per cent) to 2030, with specialised construction activities growing more and at a faster rate than construction of buildings.

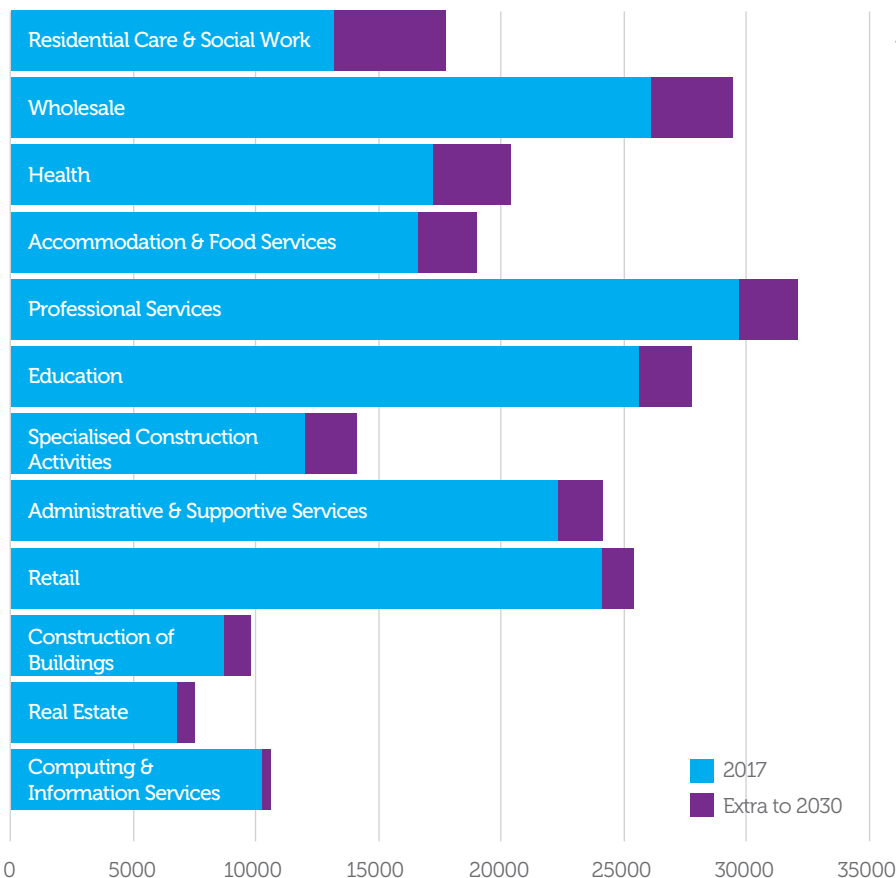
Professional services, including legal and accounting services, management consultancy and market research, is Buckinghamshire's largest

sector, providing 29,900 jobs. The strong growth seen to 2018 is forecast to moderate to 2030, with the average growth rate annual of 1.5 per cent seen from 2011 to 2018 more than halving to 0.6 per cent from 2018 to 2030.

Although forecast to grow more slowly than the economy overall, retail is still expected to generate 1,100 additional jobs to 2030, taking total employment in the sector to 25,400.

By industrial grouping, construction is forecast to show the highest rate of growth in Buckinghamshire to 2030 ahead of services, with both production and agriculture forecast to see falling workforce jobs. Jobs in services are forecast to grow slightly faster than the labour market overall to represent a new high of 85.1 per cent of all jobs in Buckinghamshire by 2030.

Chart 2: Forecast employment growth by sector, 2018-2023



Source: Experian, Local Market Forecasts ©, December 2017



Occupational change

From 2012 to 2017 the number of people employed in the UK rose by 2.68m or 9.2 per cent. Just as this increase was not felt evenly across all industries, so the occupational mix of the UK labour market has changed. Employment in managerial, professional and technical occupations has risen by 17.6 per cent since 2012, accounting for almost two thirds of employment growth since 2012 and now account for 45.1 per cent all jobs in the UK. These occupations now account for 45.1 per cent of all jobs in the UK and 47.3 per cent in Buckinghamshire.

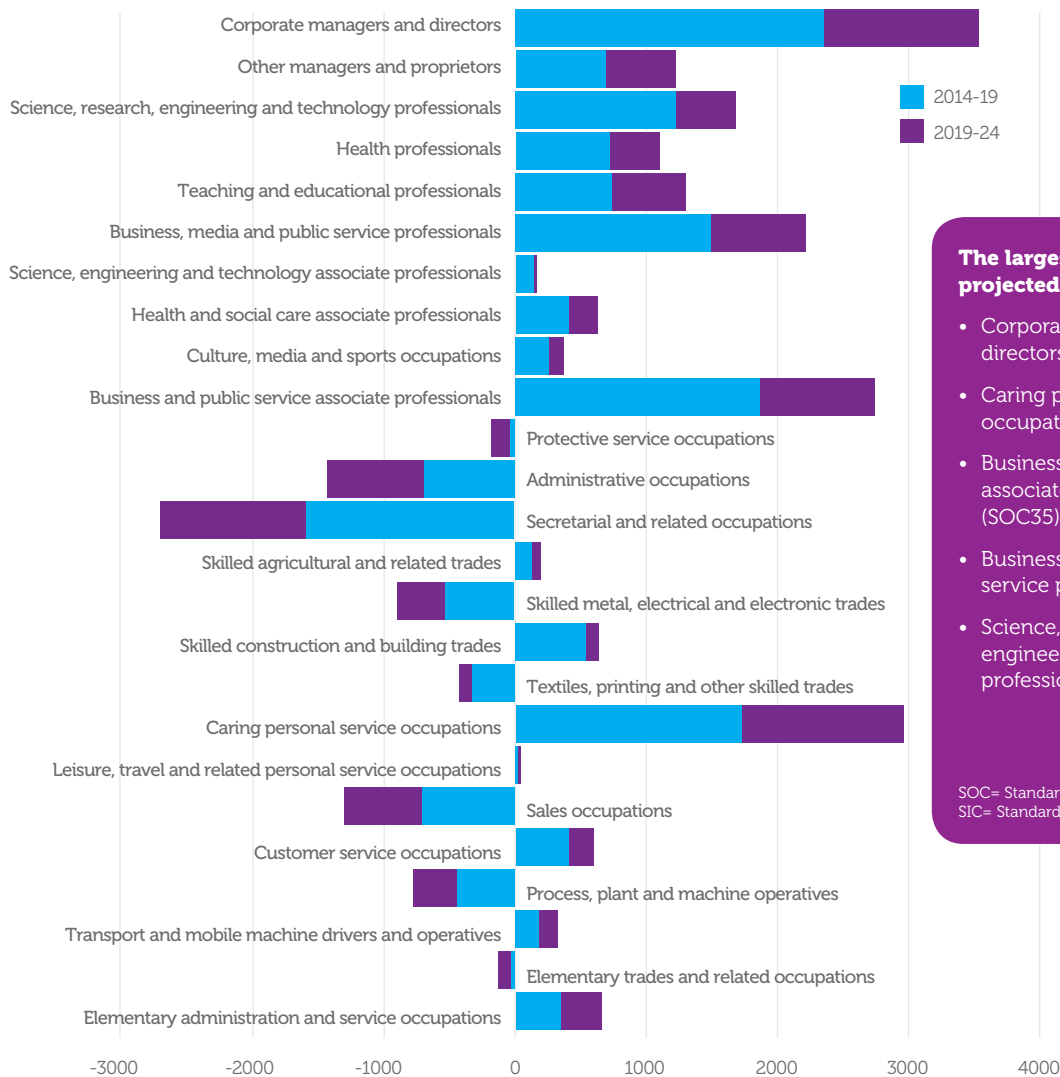
However, the strongest growth since 2012 has been recorded in personal service occupations, where the number of people employed has risen by 13.7 per cent, rising to 14.6 per cent for caring personal service occupations, including jobs such as care worker, dental nurse, support worker and home carer.

The smallest increase since 2012, of just 1.2 per cent, has been in sales and customer service occupations. Within that sector sales occupations have fallen by 3.1 per cent while customer service roles have

risen by 16.1 per cent across the UK. Administrative roles rose by 1.3 per cent.

These trends are expected to continue. From 2014 to 2024, employment in Buckinghamshire is projected to increase by 12,600 (4.8 per cent) to reach 278,000. Over this period employment in managerial, professional and technical occupations is projected to increase by 14,800 (11.8 per cent) to account for almost half (49.3 per cent) of all employment in the county.

Chart 3: Occupational projection, 2014-2024



The largest increases are projected to occur among:

- Corporate managers and directors (SOC11),
- Caring personal service occupations (SOC 61),
- Business and public service associate professionals (SOC35),
- Business, media and public service professionals (SOC24)
- Science, research, engineering and technology professionals (SOC21).

SOC= Standard Occupational Classification
SIC= Standard Industrial Classification

Source: Working Futures, UKCES, 2016

Chart 4: Projected employment by occupation in Buckinghamshire, 2024

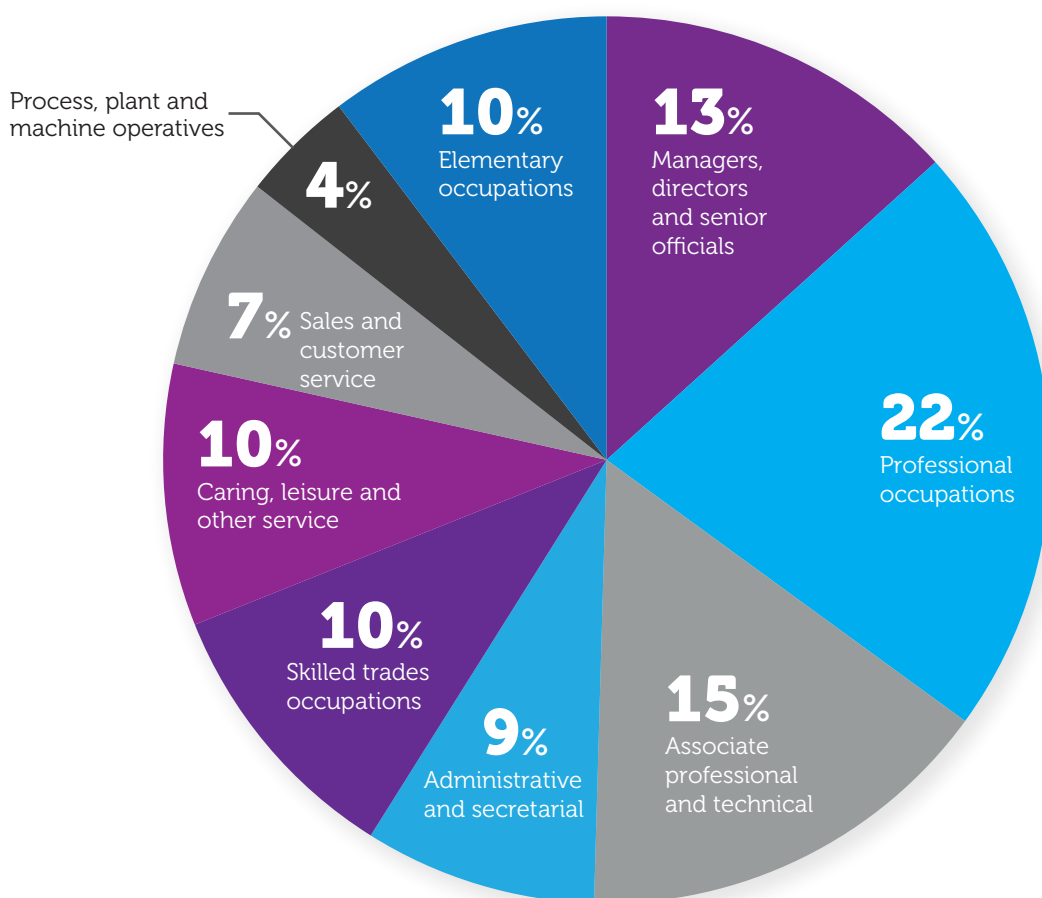


Table 7: Pay and entry routes to occupations projected to show most growth to 2026

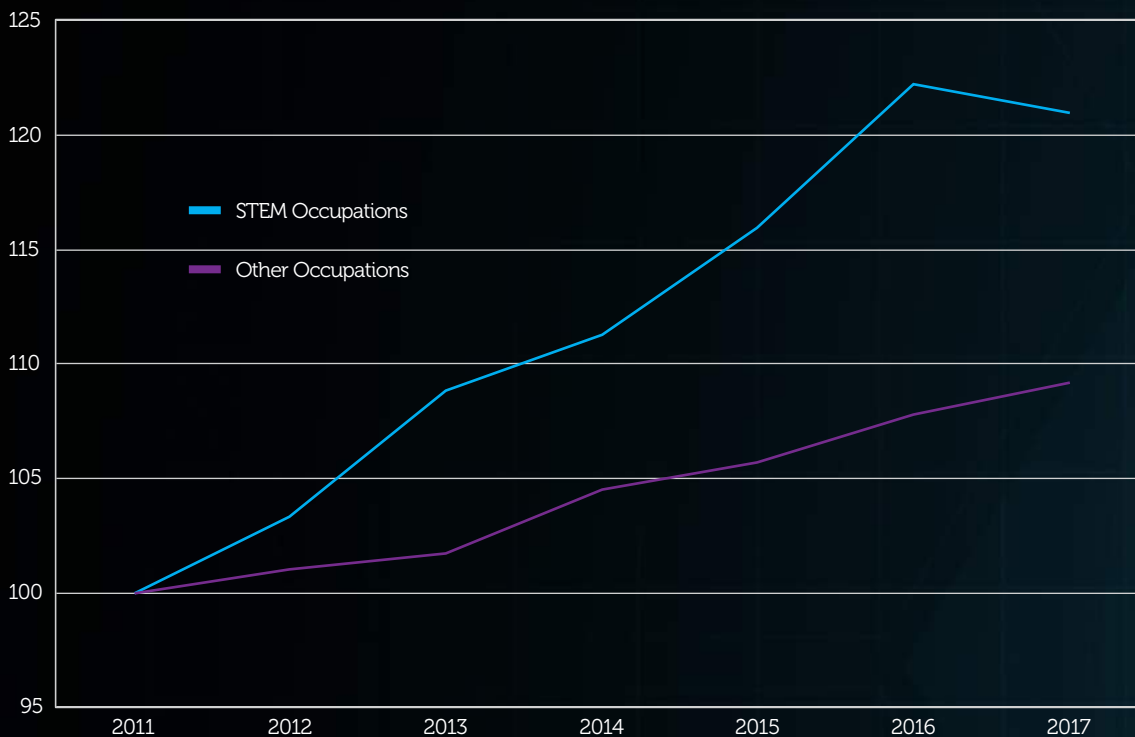
| Occupational classification | Gross median full-time annual pay, 2017 | Entry routes and qualifications | Job titles include: | Number in Buckinghamshire, 2017 |
|---|---|--|---|---------------------------------|
| Corporate Managers and Directors | 46,369 | By appointment or internal promotion | Chief executive, account director, shopkeeper, garage owner | 23,800 |
| Science, Research, Engineering and Technology Professionals | 41,508 | Degree / accredited degree | Internet developer, aerospace engineer, civil engineer, criminologist | 14,300 |
| Business, Media and Public Service Professionals | 38,547 | Degree / accredited degree | Accountant, architect, social worker, solicitor | 11,400 |
| Business and Public Service Associate Professionals | 33,812 | Formal qualification not always needed, professional qualification available | Buyers, insurance broker, air traffic controller, taxation expert | 21,400 |
| Caring Personal Service Occupations | 17,714 | No formal entry requirements | Ambulance staff, home carer, dental nurse, undertaker | 16,200 |

Sources: ONS, 2010, ASHE, ONS, 2017, Labour Force Survey, 2017

Scientific, technical, engineering and mathematics in the labour market

Between 2011 and 2017 employment in the UK rose by 10.1 per cent. Over the same period, employment in STEM occupations has risen by 22.2 per cent, taking their share of total employment in the UK to 9.1 per cent.

Chart 5: The rise of STEM occupations



Source: Labour Force Survey (table EMP04), ONS, 2017

Growth has not been even across STEM occupations. More than half (58.2 per cent) of the increase from 2011 to 2017 has been in SOC 21 (science research, engineering and technology professionals), although the fastest rate of growth has been in SOC 35 (business and public service associate professionals). These

are two of the groups projected to see the fastest rate of growth in Buckinghamshire's labour market in the next ten years.

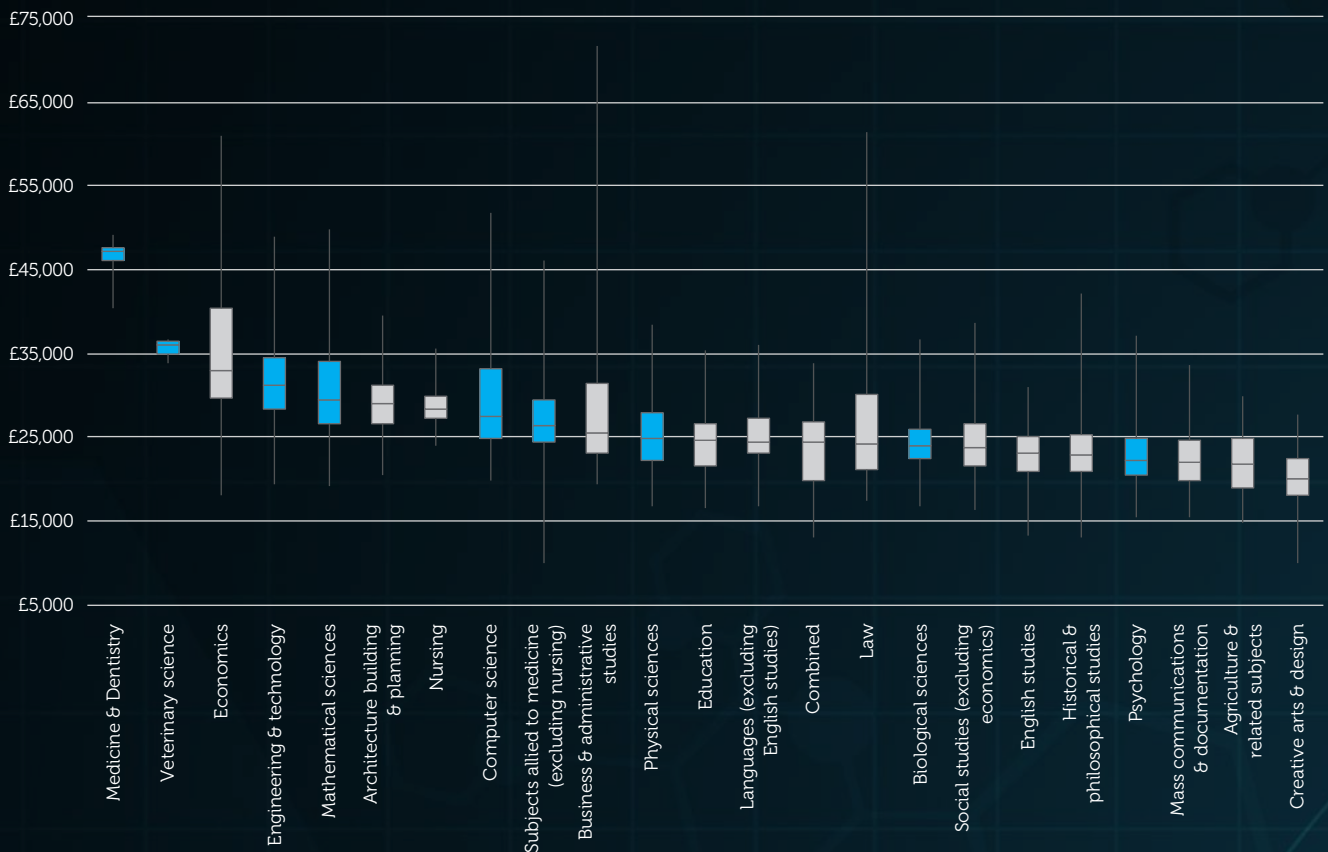
As well as showing strong growth, STEM subjects offer better pay than most others, as shown in chart 6 below and stronger employment prospects.



SOC= Standard Occupational Classification, SIC= Standard Industrial Classification

The below chart shows the range of graduates' annualised median pay five years after graduating by subject of study and institution. The centre of the box shows median annualised pay with edges of the box representing the upper and lower quartiles with the ends of the whiskers showing the maximum and minimum median annualised pay. STEM subjects are shown in blue.

Chart 6: Pay by quartile by subject studied, five years after graduation



Source: Longitudinal Education Outcomes, Department for Education, 2017

Women make up 55.4 per cent of all undergraduates in the UK but less than half of those engaged in scientific subjects, falling to just 14.8 per cent in computer science. At A level, just 38.7 per cent of mathematics A levels are taken by women and falling to 21.6 per cent in physics.

The job market for STEM skills is strong and growing in Buckinghamshire. In the last year a record 12,235 job openings were posted for STEM occupations, almost

a fifth of the total. The most commonly sought STEM occupations were: programmers and software development professionals; IT user support technicians; web design and development professionals; IT business analysts, architects and systems designers; Information technology and telecommunications professionals and IT operations technicians.

The most commonly sought specialised skills were dominated by programming

languages including SQL, JavaScript, Microsoft C# and .NET programming. Other highly specialised skills included project management, technical support, software development and customer service. While communication skills, organisational skills, problem solving, planning and team work were the most sought baseline skills.

Creative industries

Buckinghamshire's creative industries employ 17,500 people in 4,525 businesses, with computer consultancy activities making the single largest contribution to the total with 6,500 jobs, ahead of computer programming activities

(2, 100), motion picture, video and television programme production activities (1,600) and advertising agencies (1,400).

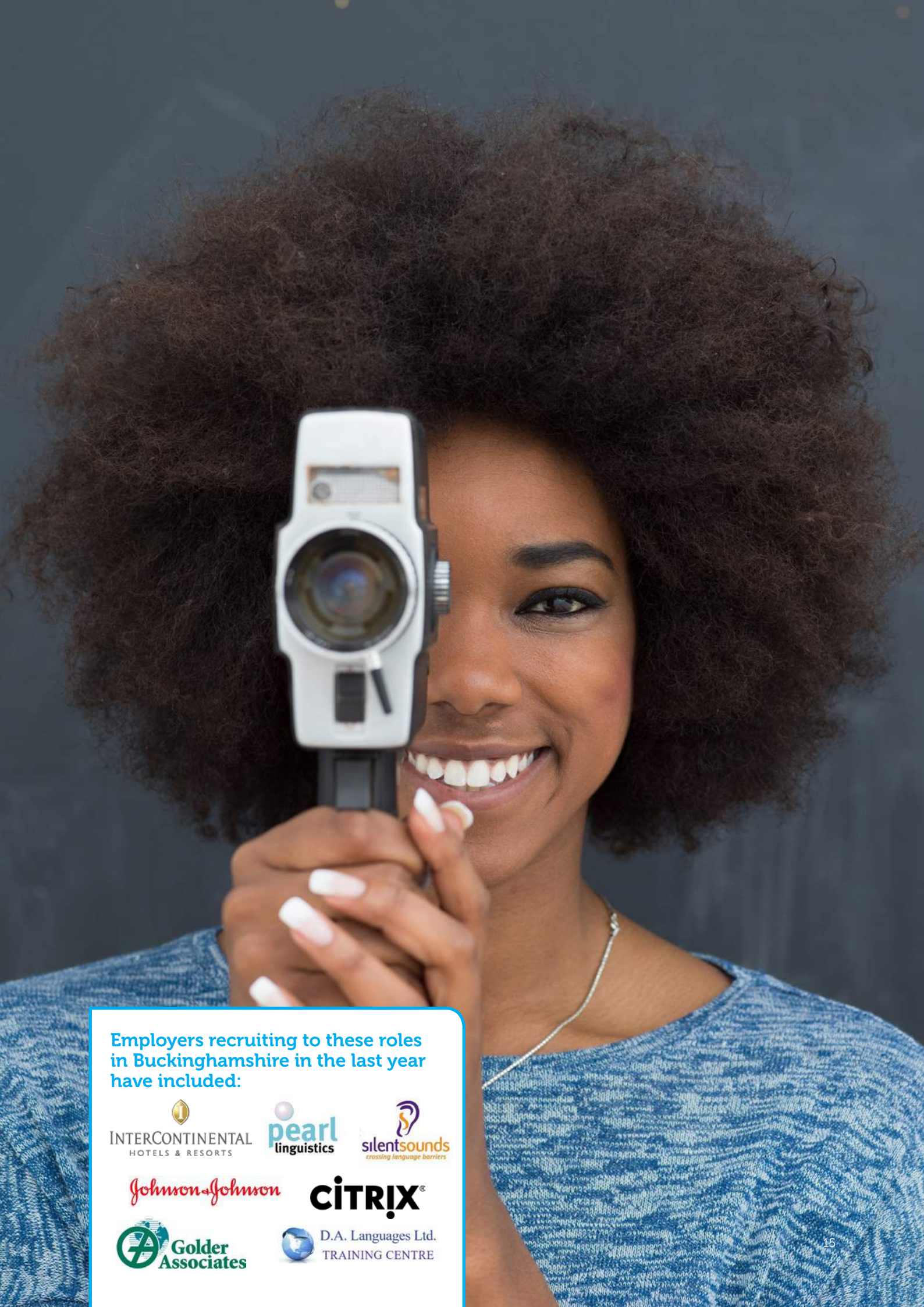
The jobs most commonly associated with the creative industries are listed below,

giving the number of people currently employed in those roles across the UK, median hourly pay and the number of job openings advertised in Buckinghamshire in the year to July 2016.

Table 8: Availability and pay of jobs in the creative industries

| Sub-sector | Name | Jobs in UK | Median hourly pay, 2017 | Openings in Buckinghamshire in last year |
|--|--|------------|-------------------------|--|
| Advertising and marketing | Marketing and sales directors | 210,851 | 36.33 | 607 |
| | Advertising and public relations directors | 31,846 | 28.92 | 83 |
| | Public relations professionals | 54,301 | 16.05 | 83 |
| | Advertising accounts managers and creative directors | 43,436 | 19.00 | 20 |
| | Marketing associate professionals | 195,734 | 13.79 | 1,176 |
| Architecture | Architects | 52,932 | 19.52 | 110 |
| | Town planning officers | 28,810 | 18.21 | 53 |
| | Chartered architectural technologists | - | - | 52 |
| | Architectural and town planning technicians | 27,812 | 14.78 | 65 |
| Crafts | Smiths and forge workers | 5,829 | 11.31 | 2 |
| | Weavers and knitters | 5,719 | 9.94 | 1 |
| | Glass and ceramics makers, decorators and finishers | 11,744 | 9.67 | 9 |
| | Furniture makers and other craft woodworkers | 27,599 | 9.97 | 31 |
| | Other skilled trades n.e.c. | 43,079 | 11.03 | 147 |
| Design: product, graphic, and fashion design | Graphic designers | 103,732 | 12.93 | 203 |
| | Product, clothing and related designers | 89,316 | 13.79 | 89 |
| Film, television, video, radio and photography | Arts officers, producers and directors | 96,615 | 17.20 | 50 |
| | Photographers, audio-visual and broadcasting equipment operators | 68,577 | 12.94 | 19 |
| IT, software and computer services | Information technology and telecommunications directors | 98,138 | 34.55 | 72 |
| | IT business analysts, architects and systems designers | 110,912 | 23.04 | 955 |
| | Programmers and software development professionals | 292,024 | 20.77 | 2,674 |
| | Web design and development professionals | 63,601 | 15.64 | 952 |
| Publishing | Journalists, newspaper and periodical editors | 72,908 | 17.35 | 102 |
| | Authors, writers and translators | 91,673 | 14.08 | 104 |
| Museums, galleries and libraries | Librarians | 30,754 | 13.08 | 7 |
| | Archivists and curators | 19,533 | 14.25 | 5 |
| Music, performing and visual arts | Artists | 48,348 | 13.72 | 39 |
| | Actors, entertainers and presenters | 45,216 | - | 35 |
| | Dancers and choreographers | 21,280 | - | 11 |
| | Musicians | 44,117 | 18.52 | 12 |

Sources: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017



Employers recruiting to these roles in Buckinghamshire in the last year have included:



Digital economy

There were 22,000 people employed in the digital sector in Buckinghamshire in 2016 in 3,935 businesses. At 9.2 per cent, Buckinghamshire has a higher share of employment in the digital economy than any other county council area, ranking 2nd among England's 38 Local Enterprise Partnerships. In Wycombe and South Bucks the sector accounts for 12.7 and 9.2 per cent of all jobs respectively to rank 11th and 25th of all 380 local authorities in Great Britain.

Computer consulting activities is the largest sub-sector, with 6,500 jobs in 1,825 businesses, ahead of the wholesale of computers, computer peripheral equipment and software (3,300, 45), computer programming activities (2,100, 450) other telecommunication activities (1,800, 85), motion picture, video and television programme production activities (1,600, 415), other information technology and computer service activities (1,600, 310) and computer

programming activities (1,700, 450).

The jobs most commonly associated with the digital economy are listed below, together with number of people currently employed in those roles across the UK, median hourly pay and the number of job openings advertised in Buckinghamshire in the year to November 2017.

Table 9: Availability and pay of jobs in the digital economy

| Name | Jobs in UK | Median hourly pay, 2017 | Openings in Buckinghamshire in last year |
|--|------------|-------------------------|--|
| Information technology and telecommunications directors | 98,138 | 34.55 | 72 |
| IT specialist managers | 194,267 | 24.36 | 250 |
| IT project and programme managers | 73,170 | 26.42 | 331 |
| IT business analysts, architects and systems designers | 110,912 | 23.04 | 955 |
| Programmers and software development professionals | 292,024 | 20.77 | 2,674 |
| Web design and development professionals | 63,601 | 15.64 | 952 |
| Information technology and telecommunications professionals n.e.c. | 188,485 | 19.44 | 620 |
| IT operations technicians | 110,112 | 14.66 | 582 |
| IT user support technicians | 98,423 | 14.45 | 1,416 |
| Telecommunications engineers | 66,221 | 15.88 | 165 |
| IT engineers | 42,681 | 13.70 | 62 |

Sources: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017



Engineering and manufacturing

Buckinghamshire's manufacturing sector provides 17,000 jobs, 7.0 per cent of all employment in the county, in 1,425 businesses. The manufacture of computer, electronic and optical products provides the most jobs in the sector (2,300), ahead of the manufacture of metal fabricated products (2,000) other transport

equipment (1,500) and the manufacture of furniture (1,000). There is a large engineering services sector in the county and associated roles in research and development.

Manufacturing employment is forecast to fall by 0.8 per cent per annum to 2027, having fallen by an average of 1.0 per

cent per annum for the last five years. In contrast, having seen employment fall by 2.2 per cent per annum since 2012, engineering is forecast to see growth of 0.2 per cent per annum to 2028.

The jobs most commonly associated with manufacturing are listed below.

Table 10: Availability and pay of jobs in engineering

| Name | Jobs in UK | Median hourly pay (£), 2017 | Openings in Buckinghamshire in last year |
|--|------------|-----------------------------|--|
| Production managers and directors in manufacturing | 285,305 | 22.68 | 401 |
| Mechanical engineers | 64,586 | 21.29 | 192 |
| Electrical engineers | 55,060 | 22.42 | 119 |
| Electronics engineers | 31,900 | 20.73 | 131 |
| Design and development engineers | 55,403 | 20.63 | 531 |
| Production and process engineers | 42,881 | 19.67 | 150 |
| Engineering professionals n.e.c. | 123,427 | 20.34 | 252 |
| Electrical and electronics technicians | 39,505 | 15.64 | 20 |
| Engineering technicians | 105,455 | 16.61 | 506 |
| Planning, process and production technicians | 26,127 | 15.61 | 80 |
| Science, engineering and production technicians n.e.c. | 46,175 | 12.73 | 354 |
| Precision instrument makers and repairers | 31,762 | 12.08 | 16 |
| Assemblers (electrical and electronic products) | 28,852 | 10.13 | 73 |
| Assemblers (vehicles and metal goods) | 52,292 | 15.49 | 70 |

Source: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017

High Performance Engineering, including micro-electronics, test and measurement; and aerospace, defence and space) is one of Buckinghamshire's priority sectors and the focus of the Enterprise Zones at Silverstone and Westcott. Since 2016 over 12,500m² of commercial floorspace office space has been delivered at these locations helping create up to 8,000 new jobs and drive major national and international investment.

Employers recruiting to these roles in Buckinghamshire in the last year have included:



Brexit

There were 11,244 EU passport holders employed in Buckinghamshire in 2011.

The food and beverage service industry employed more EU passport holders than any other in 2011, with 1,110 working in the sector, ahead of retail (907), construction (892), education (798) and human health activities (647). The 408 EU passport holders working in accommodation accounted for 17.3 per cent of all employment in the sector making it the most dependant on EU workers in

Buckinghamshire ahead of food and beverage service activities (12.4 per cent); scientific research and development (9.9); services to buildings and landscape activities (9.8); and residential care activities (9.5) and the manufacture of food products (8.2).

By occupation EU nationals were most commonly employed in elementary occupations, (1,969) ahead of employment in professional occupations (1,829), skilled trades (1,544), personal service occupations (1,271)

and associate professional occupations (1,249).

Occupation and industry of employment of EU passport holders in Buckinghamshire are considered together at a lower level of disaggregation in the table below. This allows clearer identification of the roles that are carried out by these workers in Buckinghamshire. Of the 1,518 EU passport holders working in the accommodation and food service industry, 648 are employed in elementary roles. In contrast of the

Table 11: EU passport holders employed in Buckinghamshire by occupation and industry, 2011 (green <50, amber 50-199, red >200)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total |
|---|-------|-------|-------|-----|-------|-------|-----|-----|-------|--------|
| Total | 1,151 | 1,829 | 1,249 | 842 | 1,544 | 1,271 | 640 | 749 | 1,969 | 11,244 |
| A Agriculture, forestry and fishing | 3 | 0 | 2 | 3 | 24 | 4 | 1 | 8 | 25 | 70 |
| B Mining and quarrying | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| C Manufacturing | 133 | 143 | 161 | 67 | 215 | 4 | 29 | 175 | 99 | 1,026 |
| D Electricity, gas, steam and air conditioning supply | 2 | 3 | 1 | 1 | 4 | 0 | 2 | 1 | 0 | 14 |
| E Water supply; sewerage, waste management and remediation activities | 8 | 9 | 8 | 13 | 4 | 1 | 7 | 34 | 25 | 109 |
| F Construction | 76 | 88 | 26 | 40 | 471 | 9 | 5 | 101 | 76 | 892 |
| G Wholesale and retail trade; repair of motor vehicles and motor cycles | 284 | 104 | 177 | 132 | 172 | 31 | 437 | 85 | 240 | 1,662 |
| H Transport and storage | 27 | 7 | 28 | 34 | 18 | 34 | 8 | 169 | 112 | 437 |
| I Accommodation and food service activities | 197 | 14 | 54 | 66 | 373 | 74 | 56 | 36 | 648 | 1,518 |
| J Information and communication | 74 | 242 | 138 | 47 | 45 | 11 | 14 | 15 | 19 | 605 |
| K Financial and insurance activities | 35 | 25 | 52 | 59 | 1 | 2 | 11 | 1 | 3 | 189 |
| L Real estate activities | 25 | 7 | 25 | 23 | 9 | 9 | 2 | 2 | 6 | 108 |
| M Professional, scientific and technical activities | 103 | 321 | 240 | 103 | 24 | 21 | 24 | 33 | 19 | 888 |
| N Administrative and support service activities | 38 | 19 | 66 | 61 | 96 | 86 | 12 | 45 | 412 | 835 |
| O Public administration and defence; compulsory social security | 29 | 38 | 58 | 63 | 6 | 9 | 6 | 4 | 19 | 232 |
| P Education | 8 | 383 | 58 | 38 | 20 | 190 | 3 | 13 | 85 | 798 |
| Q Human health and social work activities | 64 | 392 | 71 | 55 | 19 | 608 | 12 | 13 | 110 | 1,344 |
| R Arts, entertainment and recreation | 26 | 10 | 51 | 13 | 20 | 23 | 5 | 8 | 29 | 185 |
| S Other service activities | 18 | 22 | 30 | 23 | 20 | 92 | 6 | 6 | 32 | 249 |
| T Activities of households as employers; producing activities of households | 0 | 0 | 0 | 0 | 3 | 63 | 0 | 0 | 10 | 76 |
| U Activities of extraterritorial organisations and bodies | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |

Source: Census, 2011, ONS, 2017

1 Managers, directors and senior officials 2 Professional 3 Associate professional and technical
 4 Administrative and secretarial 5 Skilled trades 6 Caring, leisure and other service 7 Sales and customer service
 8 Process, plant and machine operatives 9 Elementary

888 EU passport holders employed in the professional, scientific and technical sector, 321 were employed in professional occupations with a further 240 employed as associate professionals, employment in both occupational groups usually demanding high levels of education attainment. In the construction sector, more than half of EU passport holders were employed in the skilled trades, almost half of those employed in human health and social work activities being in caring and personal service occupations. In wholesale and retail although the highest number of EU passport holders were employed in sales and customer service roles there was a more even distribution of employment across the occupational classification.



The Fourth Industrial Revolution

"[The] fourth industrial revolution is of a scale, speed and complexity that is unprecedented ... it will disrupt nearly every sector in every country, creating new opportunities and challenges for people, places and businesses to which we must respond"

HM Government (2017, 32) Industrial Strategy

The main areas of technological change include artificial intelligence (AI), robotics, the internet of things (IoT), connected autonomous vehicles (CAVs), 3D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing.

These technologies will disrupt and may even destroy some well-established industries and markets with up to 30 per cent of UK jobs 'at risk of automation' by the early 2030s. The likely impact on employment will vary by sector: Transportation and Storage could see more than half of jobs lost, manufacturing 46 per cent, while wholesale and retail may lose 44 per cent of jobs. By skills level, it is estimated that close to half of UK workers educated to GCSE-level education were at risk, compared to around 12 per cent of those with at least an undergraduate degree.

However, the net impact of automation on total employment remains unclear because new automation technologies in areas like AI and robotics will create new jobs and, through productivity

gains, generate additional wealth and spending that will support additional jobs, for example in the service sector.

This process of 'creative destruction' is likely to produce winners and losers. To navigate successfully this process of change, Buckinghamshire must make the most of our 'domain expertise'; the deep knowledge we possess in space, automotive/low-emission vehicles, digital and creative industries, and healthcare and medicine, plus business expertise in our significant cluster of micro-businesses. We need to leverage the knowledge and spin-out potential of Oxford, Cambridge and London; and to attract and retain graduates and higher level apprentices, especially in STEM subjects, if we are to utilise the potential of our existing knowledge and innovation assets.

Equipping people with the skills needed for the jobs of the future is a central aim of the government's Industrial Strategy and of the Buckinghamshire Strategic Economic Plan and Growth Strategy.

Life sciences and agri-tech

There are 34,500 jobs in 8,205 businesses in Buckinghamshire's agri-tech sector, including 20,500 jobs in 3,100 businesses not in management and

computer consultancy. Employment in the sector has grown at an average of 3.8 per cent per year over the last five years.

The jobs most commonly associated with agri-tech are listed below.

Table 12: Availability and pay of jobs in life sciences and agri-tech

| Name | Jobs in UK, 2017 | Median hourly pay (£), 2017 | Openings in Buckinghamshire in last year |
|--|------------------|-----------------------------|--|
| Managers and proprietors in agriculture and horticulture | 35,258 | 12.53 | 1 |
| Chemical scientists | 24,001 | 18.17 | 27 |
| Biological scientists and biochemists | 83,425 | 18.96 | 145 |
| Research and development managers | 51,410 | 22.86 | 57 |
| Laboratory technicians | 79,767 | 10.06 | 124 |
| Science, engineering and production technicians n.e.c. | 46,175 | 12.73 | 354 |
| Farmers | 125,150 | 11.19 | 15 |
| Horticultural trades | 16,109 | 8.33 | 6 |
| Farm workers | 64,324 | 8.68 | 3 |

Source: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017



Employers recruiting to these roles in Buckinghamshire in the last year have included:



Construction

There are 13,000 jobs in 3,600 businesses in Buckinghamshire's construction sector. House building is the largest component, accounting for 3,000 jobs, ahead of electrical installation, plumbing, heat and

air-conditioning installation (1,500), construction of other civil engineering projects, including sports stadiums (1,200), development of building projects (1,000) and the construction of commercial premises (900).

Since 2009 the number of jobs in construction in Buckinghamshire has fallen by an average of 1.5 per cent per annum, despite this the sector is forecast to grow by 1.0 per cent per annum to 2030, adding an extra 3,600 jobs.

Table 13: Availability and pay of jobs in construction

| Name | Jobs in UK | Median hourly pay (£), 2017 | Openings in Buckinghamshire in last year |
|---|------------|-----------------------------|--|
| Production managers and directors in construction | 195,177 | 20.35 | 338 |
| Civil engineers | 77,535 | 19.90 | 288 |
| Architects | 52,932 | 19.52 | 110 |
| Town planning officers | 28,810 | 18.21 | 53 |
| Quantity surveyors | 46,334 | 20.38 | 311 |
| Business and financial project management professionals | 221,211 | 23.90 | 196 |
| Chartered architectural technologists | - | - | 52 |
| Construction project managers and related professionals | 68,887 | 17.32 | 28 |
| Building and civil engineering technicians | 29,080 | 12.89 | 14 |
| Architectural and town planning technicians | 27,812 | 14.78 | 65 |
| Science, engineering and production technicians n.e.c. | 264,799 | 14.38 | 229 |
| Steel erectors | 7,358 | 11.74 | 2 |
| Bricklayers and masons | 69,932 | 11.80 | 41 |
| Roofers, roof tilers and slaters | 51,332 | 11.85 | 15 |
| Plumbers and heating and ventilating engineers | 191,478 | 14.35 | 212 |
| Carpenters and joiners | 231,760 | 12.24 | 135 |
| Glaziers, window fabricators and fitters | 40,573 | 9.65 | 5 |
| Construction and building trades n.e.c. | 244,347 | 11.50 | 115 |
| Plasterers | 58,156 | 11.85 | 8 |
| Floorers and wall tilers | 27,936 | 11.80 | 8 |
| Painters and decorators | 120,426 | 11.23 | 58 |
| Construction and building trades supervisors | 63,569 | 15.07 | 51 |
| Scaffolders, staggers and riggers | 29,852 | 15.60 | 14 |
| Road construction operatives | 23,582 | 11.50 | 9 |
| Rail construction and maintenance operatives | 6,152 | 12.15 | - |
| Construction operatives n.e.c. | 97,945 | 9.61 | 81 |
| Elementary construction occupations | 183,963 | 9.80 | 307 |

Sources: Labour Force Survey, ONS, 2017; ASHE, ONS, 2017; Labour Insight, 2017

Employers recruiting to these roles in Buckinghamshire in the last year have included:



Health and social care

Buckinghamshire's health and social care sector provides 26,500 jobs in 1,170 businesses. Of those jobs 11,000 are part-time. Hospital activities are the largest sub-sector providing

7,500 jobs, ahead of other human health activities (4,300), residential care activities for the elderly and disabled (2,500), social work activities without accommodation for

the elderly and disabled (2,400), child day care activities (2,100) and general medical practice activities (2,000).

Table 13: Availability and pay of jobs in health and social care

| Name | Jobs in UK, 2017 | Median hourly pay (£), 2017 | Openings in Buckinghamshire in last year |
|--|------------------|-----------------------------|--|
| Health services and public health managers and directors | 66,855 | 22.86 | 227 |
| Social services managers and directors | 38,195 | 19.52 | 11 |
| Medical practitioners | 271,498 | 33.52 | 567 |
| Psychologists | 28,665 | 22.96 | 67 |
| Pharmacists | 55,381 | 20.50 | 61 |
| Ophthalmic opticians | 21,578 | 21.04 | 22 |
| Dental practitioners | 46,086 | - | 16 |
| Medical radiographers | 33,326 | 18.22 | 85 |
| Podiatrists | 12,292 | 18.01 | 6 |
| Health professionals n.e.c. | 69,953 | 16.74 | 56 |
| Physiotherapists | 53,620 | 17.90 | 133 |
| Occupational therapists | 40,015 | 17.61 | 65 |
| Speech and language therapists | 14,450 | 16.13 | 38 |
| Therapy professionals n.e.c. | 45,614 | 18.87 | 15 |
| Nurses | 659,289 | 16.76 | 1,755 |
| Midwives | 42,840 | 19.07 | 12 |
| Paramedics | 23,157 | 18.13 | 14 |
| Dispensing opticians | 7,419 | 13.99 | 16 |
| Pharmaceutical technicians | 33,503 | 10.99 | 24 |
| Medical and dental technicians | 40,712 | 14.16 | 73 |
| Health associate professionals n.e.c. | 74,755 | 13.39 | 306 |
| Youth and community workers | 59,362 | 12.56 | 68 |
| Child and early years officers | 42,090 | 12.25 | 53 |
| Housing officers | 49,990 | 13.89 | 46 |
| Counsellors | 25,615 | 14.07 | 72 |
| Welfare and housing associate professionals n.e.c. | 129,480 | 11.74 | 194 |
| Nursing auxiliaries and assistants | 331,131 | 9.86 | 184 |
| Ambulance staff (excluding paramedics) | 22,290 | 10.86 | 26 |
| Dental nurses | 49,772 | 9.92 | 106 |
| Houseparents and residential wardens | 39,753 | 10.48 | 40 |
| Care workers and home carers | 778,113 | 8.82 | 1,124 |
| Senior care workers | 80,325 | 9.20 | 123 |
| Care escorts | 12,703 | 8.33 | 4 |
| Hospital porters | 15,176 | 9.19 | 3 |

Sources: Labour Force Survey, ONS, 2017, ASHE, ONS, 2017, Labour Insight, 2017

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We are investing
in
culture
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be



Employers recruiting to these roles in Buckinghamshire in the last year have included:



For further information visit oppsinbucks.org
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