



# Oxfordshire Labour Market Information

helping to build a responsive skills support system

Issue 3 Summer 2015











Produced by the Economy & Skills Team Oxfordshire County Council

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### Why LMI is important

Oxfordshire Labour Market Information is now only available as an electronic download and future issues will be on-line. The current issue and back copies can be viewed at: http://o2i.org/lmi-summer-2015/.

The purpose of this labour market bulletin is to inform young people, and those that advise young people, including parents, of the job opportunities available locally, now and in the future. As our economy grows there is increased demand from local employers for people to fill jobs, alongside an increasing number of people who choose self-employment. Our aim is to broaden young people's knowledge and understanding of our labour market, raise their aspirations and help them plan their career pathways based on high quality, locally relevant information.

Whilst the focus of our LMI bulletin is young people the information and intelligence in this report is equally applicable to all. If your organisation would like a specific LMI briefing please contact Jenny Bradnock at jenny.bradnock@oxfordshire.gov.uk

This LMI bulletin is for teachers, careers advice workers, others working with young people, parents and carers and those with an interest in young people's employment choices and career pathways. It is a tool to be used for educational or guidance purposes. By gaining a better understanding of the local job market - what jobs are currently in demand and how jobs are changing - young people and those who advise them will be better able to make informed decisions about their educational options and how these may be linked to future career opportunities. A web based version of the bulletin will be found on the O2i, Opportunities to Inspire web pages at <a href="http://o2i.org/">http://o2i.org/</a> from 2016.

Labour market information can tell us

what jobs are in demand which sectors are growing or shrinking where the jobs

are

Knowing about the local labour market will

make young people aware of the range of work opportunities open to them locally With an
understanding of
the breadth of
career choices there
are locally

young people will be better able to think about the routes into them, making informed decisions about the subjects they study and work experience they might seek

### Have you seen?

Oxfordshire Skills Strategy to 2020: Building a responsive skills support system

http://www.oxfordshireskillsboard.org/oxfordshireskills-strategy-2020/

# The Oxfordshire Economy

2014 circulation: 672,500, the Oxfordshire population



360,900 people in Oxfordshire are economically active.

97% of the economically active are in employment and two-thirds of jobs are full-time.

0.5% on Job Seekers Allowance. The lowest since records began!

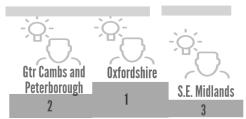


30,000 enterprises, with 88% employing 0-9 employees.

3,500 new businesses in 2013 showing strongest growth in recent years.



Oxfordshire rated the most innovative economy in the UK ...



... and has the third highest concentration of research and development workers Job density rising: 93 jobs exist for every 100 residents of working age.



60% of 16+ workforce in professional, higher skilled jobs.



49% of the 16-64 workforce are educated to graduate level

...and we have the lowest rate with no qualifications (5%).



46% of students go on to University (56% nationally) in 2012/13.

A third of students work while studying.

Labour Market Bulletin - Summer 2015

### Introduction

Oxfordshire has the most innovative economy in the UK, according to recent research

Oxfordshire has one of the strongest economies nationally. To continue to succeed in a globally competitive world and be a beacon of sustainable economic growth it needs a well trained workforce.

Oxfordshire is a 'knowledge-based' economy – where the use and application of knowledge is a key feature –a report published earlier this year named Oxfordshire as the most innovative region in the country<sup>1</sup>

Oxfordshire's economy is also competitive and proved resilient during and following on from the last recession. A report by the ERC published in June 2015 positioned the county top for product and service, process and collaborative innovation and in research and development.

What might explain Oxfordshire's growing economic confidence?

Oxfordshire has a number of distinctive features:

Table 1: Oxfordshire's economy - key statistics <sup>2</sup>				
Total population, 2014	672,500			
Working age population, 2014	431,300			
Total output (GVA), 2013	£19.2 billion			
Number of jobs, 2013	324,600			
Number of self-employed, March 2015	51,000			
Economically active, Dec 2014	80%			
Claimants of Job Seekers Allowance, June 2015	0.6%			
Number of enterprises, 2014	28, 315			
Average gross weekly earnings, 2014	£579			
Population with a degree or above, 2014	48.6%			
With no qualifications, 2014	4.8%			

- It has two leading universities the University of Oxford is rated one of the best in the world<sup>3</sup> and Oxford Brookes is one of the top performing modern universities nationally.
- It is home to a group of large science and research facilities that includes Harwell Oxford Innovation & Science Campus (home to the Rutherford Appleton Laboratory, Diamond Light Source and the gateway to the space sector – the newly established European Space Agency is here alongside the Satellite Applications Catapult Centre) and the UK Atomic Energy Authority Culham Centre for Fusion Energy - home to the UK's national fusion research laboratory.

<sup>&</sup>lt;sup>1</sup> Benchmarking local innovation – the innovation geography of the UK, Enterprise Research Centre, June 2015, http://www.enterpriseresearch.ac.uk/wp-content/uploads/2015/05/Benchmarking-Local-Innovation1.pdf

<sup>&</sup>lt;sup>2</sup> ONS Annual Population Survey, year end December 2014 and March 2015; Claimant Count; Business Register and Employment Survey, 2014

<sup>&</sup>lt;sup>3</sup> Ranked 3<sup>rd</sup> in the world by The Times Education University Rankings 2014/15

- It has many high-end manufacturing companies (such as those supporting the motor industry)
- Oxfordshire is also home to globally recognised companies like MINI Plant Oxford, Oxfam, Oxford University Press, Siemens, Oxford Instruments and more. Oxfordshire also has a culturally rich environment making the county an attractive place to live and work.
- It has a highly skilled workforce 49% are graduates and the lowest rate of residents with no qualifications.
- It has the third highest concentration of research and development workers in the country<sup>4</sup>.

These last two features show the importance of the 'human' factor in the county's success.

The Oxfordshire Strategic Economic Plan<sup>5</sup> sets an ambition for Oxfordshire to 2030 to drive accelerated economic growth to meet the needs of our science and knowledge rich economy placing Oxfordshire at the forefront of the UK's global growth ambitions. It states an ambition for up to 75,000 new jobs to 2030 – many of which have yet to be 'invented' – reflecting the pace of change and effects of new and emerging technologies on the labour market.

**Growth brings challenges** – a key challenge in our extremely tight labour market with low levels of unemployment (0.5% Job Seekers Allowance claimants) and high job density at 0.93 – i.e. there are 93 jobs available for every 100 residents of 'working age'. With growth in the working age population in coming years expected to contract, this will present further challenges.

This situation makes it vital that we are able to provide a well-educated, appropriately skilled workforce to meet demand locally but also that each individual meets their potential. While Oxfordshire is excelling in some quarters, it is doing less well in others. On average, 59.4% of pupils gained 5+ A\*-C GCSEs in 2014. However, while results for the county have improved in recent years and is now ahead of the England average, Oxfordshire still falls far behind other counties. For example, in neighbouring Buckinghamshire, 69.5% of pupils achieved 5 A\*-C grades in 2014. Oxfordshire also has a lower proportion of students who go onto university – 46% in 2012/13 compared to 56% nationally.

'The labour market is becoming more complex and the decisions young people make while in education are becoming ever more important. We need to think of those decisions as investment decisions, allowing an individual to build a profile which will ultimately optimise chances of good education to work transitions.'

Peter Cheese, Chief Executive, Chartered Institute of Personnel and Development<sup>6</sup>

<sup>&</sup>lt;sup>4</sup> Employees in employment after Cambridgeshire and Hertfordshire.

<sup>&</sup>lt;sup>5</sup> Oxfordshire Strategic Economic Plan, Oxfordshire Local Enterprise Partnership, March 2014.

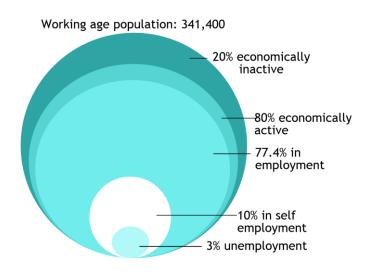
<sup>&</sup>lt;sup>6</sup> How should our schools respond to the demands of the twenty first century labour market? Eight perspectives, Education and Employers Research, February 2015

Evidence suggests that poor transitions into work, where early decisions count, have lasting implications for an individual's life chances. The labour market is more complex than in previous years.

With a 'hollowed' out middle – medium skilled jobs disappearing; 'bumping out' – graduates trading down in the jobs market; employers bemoaning the lack of skilled workers for the jobs that exist and young people's lack of soft skills – it is more important than ever for young people to 'develop the knowledge, skills and attributes which will shape their progression through working life' with an understanding of the needs of the labour market.

# Oxfordshire's economy

### Working age population<sup>7</sup>



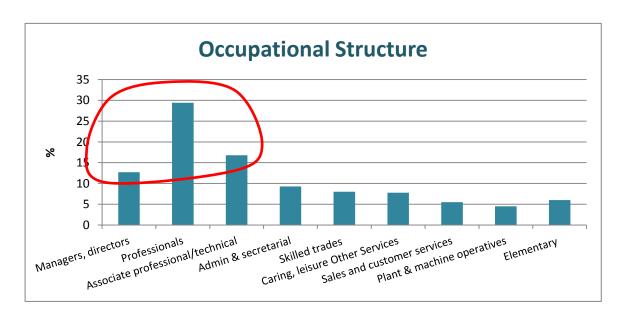
# Most working age adults in Oxfordshire are economically active and in work

Rates of economic activity and employment in Oxfordshire are above the national average.

Three quarters of those in employment work full-time rather than part-time.

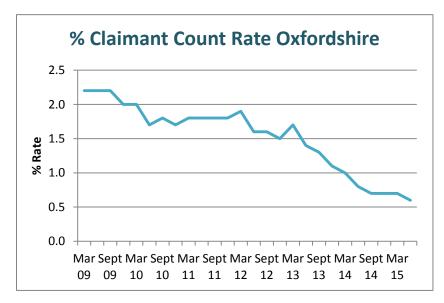
Self-employment has grown over the last 10 years. However, on average, self-employed people are more likely to work part-time, earn less, and be 'underemployed'<sup>8</sup>.

60% of Oxfordshire residents are in the higher skilled occupations – well above the national average (44%).



<sup>&</sup>lt;sup>7</sup> The population of work age used here are those aged 16 to 64 years. But this is changing. Now, young people have to continue in education or training, at least part-time, until they are 18. Meanwhile, while the retirement age is 65 years many people work beyond this.

<sup>&</sup>lt;sup>8</sup> http://www.ft.com/cms/s/o/d8f6c774-d449-11e3-a122-00144feabdco.html#axzz3h66ZcCID, 6<sup>th</sup> May 2014



Only 0.5% of working age adults in the county claim Job Seeker's Allowance.

Estimates of unemployment on the broader survey based measure<sup>9</sup> shows that in the year to March 2015, there were 11,600 unemployed people in Oxfordshire or 3.3 per cent of all economically active people compared to 6% nationally.

### **Young People**

### Did you know?

For the first time, since records began in 1992, youth unemployment in Oxfordshire is below the overall level of unemployment.

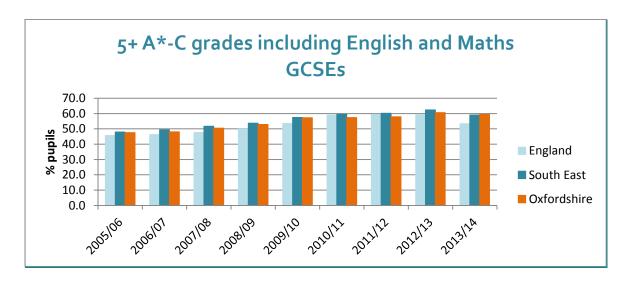
Figure 3: JSA Claimants August 2015

	Number	Rate %
Aged 16-64	2,090	0.5
Aged 18-24	310	0.5
Aged 25-49	1,170	0.5
Aged 50-64	605	0.5

About 32,000 young people resident in Oxfordshire are aged 16 to 19. Of these, it is estimated approximately a third work while studying, mostly in part-time roles and predominately in retail, hotel and restaurant services.

<sup>&</sup>lt;sup>9</sup> Under ILO guidelines, anybody who is without work, available for work and seeking work is unemployed. The Claimant Count is the number of people who are receiving benefits principally for the reason of being unemployed.

### Qualifications



59.4% of Oxfordshire pupils in 2014 got five A\* to C grades, including English and Maths. The national average for the same benchmark is 53.4 per cent, with Oxfordshire coming 44

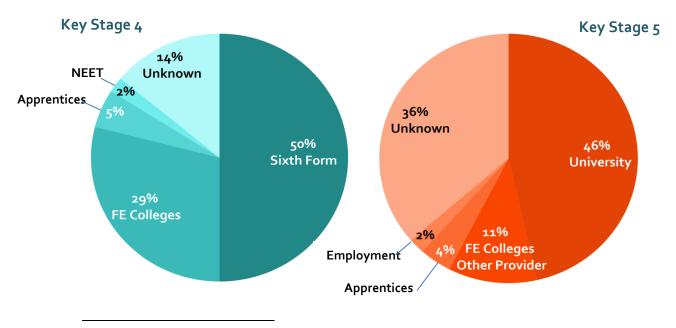
### Did you know?

Oxfordshire has the lowest proportion of residents with no qualifications (4.8%) and the highest with a degree or higher (49%).

out of 152 local authorities. While the percentage of young people with 5 A\*-C grades has been improving year on year since 2006, grades slipped last year.

However, for the first time since 2006
Oxfordshire passed the regional average.

### Destinations<sup>10</sup> – KS<sub>4</sub> and KS<sub>5</sub> (2012/13)

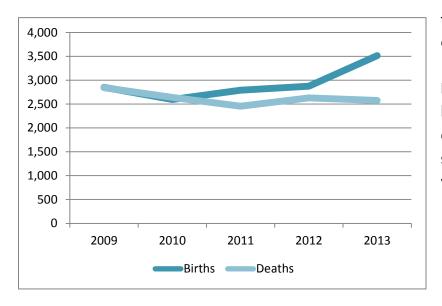


<sup>&</sup>lt;sup>10</sup> State funded schools only

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• At the end of year 11, most young people are in sixth form or further education. At the end of year 13, 46% of those who stayed on to study A' levels or equivalent went onto university, with 11% remaining or studying at FE college.

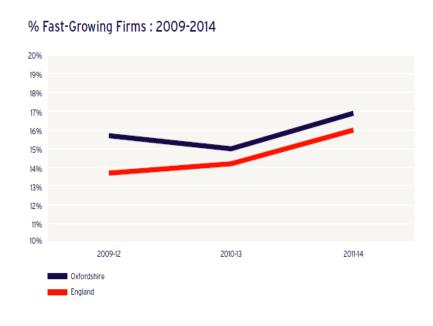
### **Business and Enterprise**



There are about 30,000 enterprises in the county<sup>11</sup>.

In 2013, over 3,500 new businesses started up in the county — showing the strongest growth in recent years.

### Business growth in Oxfordshire is very strong



A report by the Enterprise Research Centre<sup>12</sup> shows Oxfordshire is hot on the heels of London when it comes to business growth. ERC looked at the growth of start-ups and existing firms. London is top for fastgrowing businesses, with 19% of its businesses showing annual employment growth of 20% or more. Oxfordshire is close behind with 16.9% of its business showing this kind of fast growth.

<sup>&</sup>lt;sup>11</sup> ONS UK Business Demography, 2014: This is a different database that the Inter Departmental Business Register and records the births, deaths and stock of enterprises.

Oxfordshire is dominated by small and medium sized businesses. 88% are micro businesses employing 9 or fewer people. 98% of businesses employ 49 people or less. However, the large organisations (with 250 plus employees), while small in number, employ a significant percentage of the workforce. This is reflected in the table below.

Table 4 shows the industry structure in Oxfordshire by looking at it in two ways – first, by the number of businesses by sector. This tells us where private enterprise dominates. An alternative is to look at the sectors where people are employed. Educational and health organisations are small in number but employ over 50,000, and 40,000 people, respectfully.

Table 2: Structure of industry in Oxfordshire, 2013

Sectors	% of	% of Sectors	
	businesses		employees14
Professional, scientific & technical	21	Education	16
Construction	11	Health	12
Information & communication	9	Professional, scientific & technical	11
Arts, entertainment, recreation and other services	8	Retail	10
Business administration and support services	7	Accommodation & food services	8
Retail	7	Manufacturing	7
Agriculture, forestry & fishing	6	Business administration and support services	6
Accommodation & food services	5	Information & communication	6
Production	5	Construction	4
Wholesale	4	Wholesale	6
Health	4	Arts, entertainment, recreation, other services	5
Property	3	Transport & Storage	3
Motor trades	3	Public Administration	3
Education	2	Motor trades	2
Transport & storage (inc. postal)	2	Financial and insurance	2
Finance & insurance	1	Property	1
Public administration and defence	1	Agriculture, forestry, mining	n/a

n/a – not available

<sup>&</sup>lt;sup>13</sup> ONS UK Business: Activity, Size and Location, 2014

<sup>&</sup>lt;sup>14</sup> Business Register and Employment Survey – excludes the self-employed (about 54,000) and the Armed Forces estimated to number about 10,000 in Oxfordshire)

- The top 4 business sectors by enterprise are: professional, scientific and technical firms (21%), followed by construction (11%), information and technology firms (9%), and the arts, entertainment and recreation (8%).
- The top 4 industries by the % employed are: Education 16%, well above the national average of 10%; followed by the health sector (12%). The presence of two top universities and the health and research facilities in Oxford and at Science Vale explain why this is the case.

### An innovative economy

### Oxfordshire has the most innovative economy in the UK

According to the first innovation map of the UK, produced by the Enterprise Research Centre<sup>15</sup>, Oxfordshire has the most innovative economy. It forms part of the 'arc of innovation' stretching from Cambridge through the southeast Midlands and along the M4 corridor to Oxfordshire and Gloucestershire. Only 17% of London businesses introduced a new or updated product or service in 2010-12 compared with 27% in Oxfordshire.

### Why is this important?

It's important for many reasons but it's key to driving growth and the county remaining competitive. In terms of jobs, new products, services or processes can be behind the loss of some jobs and rise of new ones.

# 'Arc of innovation' Other key innovation Centres Manchester Liverpool Birmingham Milton Cambridge Keynes Gloucester Oxford

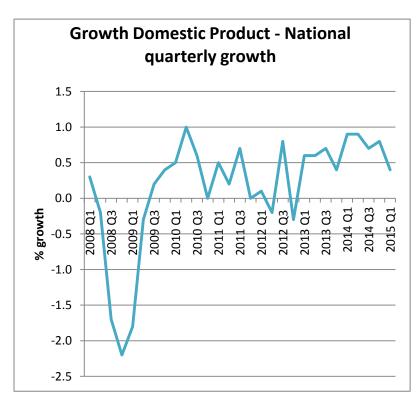
London

**UK innovation hotspots** 

<sup>&</sup>lt;sup>15</sup> Benchmarking local innovation – the innovation geography of the UK, Enterprise Research Centre, June 2015, http://www.enterpriseresearch.ac.uk/wp-content/uploads/2015/05/Benchmarking-Local-Innovation1.pdf

### **Economic outlook**

We have seen a strengthening UK economy – which has been very much evident in Oxfordshire. GDP growth has averaged 0.6% each quarter since 2013. In 2014, growth averaged 2.6% for the year - this was above all the G7 countries<sup>16</sup> where growth has been slower.



Despite weaker growth in the first quarter of this year smaller than forecast at o.4%, and the still unravelling fallout from the Greek debt crisis, expectations about growth appear solid nonetheless. The Government forecast GDP growth averaging 2.4 per cent a year (and dipping only slightly in 2016 when the pace of fiscal tightening is greatest). This should have a positive effect on job growth and employment.

Manufacturing performance has been sluggish - growth in services (and through consumer spending) continues to drive growth.

The latest data shows that three broad sectors made a positive contribution to output growth in the first quarter: distribution, hotels & catering; transport, storage & communications, and government and other services. Output growth in the manufacturing sector slowed to close to a standstill except construction – which did better than expected. Services (the largest and most important sector) expanded by 0.4% in Q1 2015, significantly slower than in the final quarter of last year. Figures from the Office of National Statistics show that the economy remained dependent on consumer spending in the first quarter of the year.

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<sup>&</sup>lt;sup>16</sup> Seven major advanced economies of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States

# The Oxfordshire Job Scene



24,300 job vacancies posted online March - June 2015

A fifth of all job vacancy postings are in ICT.

Top occupation in demand: Programmers and software developers





Nurses, Chefs, Sales Executives, Retail Managers and Administrators also in demand.

82% of the top 20 occupations posted require upper-middle to high skill levels.





24% of all vacancies in the county are due to a shortage of skills.

Employability skills vital!

Five times as many postings ask for communication skills above all else.





Most entry level job vacancy postings in administration and customer service.

Most graduate level job vacancy posting in ICT and business professionals.

2014/15 apprenticeship training starts up 18% at the same point in previous year.

Retail and commercial enterprise apprentice vacancies top.



Redevelopment opportunities boost to local economy:

Thousands of jobs to be created in Bicester, Oxford and Didcot, Science Vale over next 15 years



Labour Market Bulletin: Summer 2015

# **Current job opportunities**

This chapter looks primarily at job opportunities locally using vacancy data from Labour/Insight – this is an online labour market tool that scans and collates online job postings. However, it should be noted that the data is limited to web based postings and therefore may not be representative of all vacancies – a good number of vacancies are filled informally but it does provide a broad overview of the jobs market.

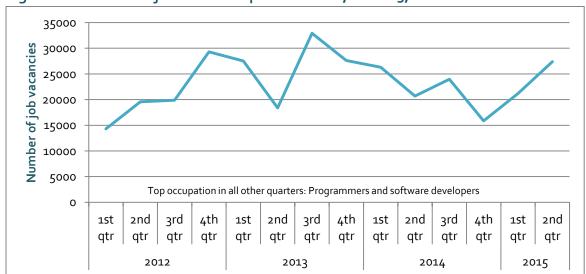


Figure 10: Number of job vacancies posted online, 2012-15, Oxfordshire

Source: Labour Insight, Burning Glass Technologies

• Job postings averaged 20,700 per quarter through 2012; rising to 26,600 in 2013, 21,700 in 2014 and rising again in to 24,300 per quarter until mid-2015.

### What occupations are currently most in demand?

Table 3: Top 20 occupations most in demand, 2nd quarter 2015, Oxfordshire 17.

Rank	Occupation	Job Postings	Job Group	ONS skill level
1	Programmers and software development professionals	1,881	ICT	4
2	Nurses	989	Health	4
3	Other administrative occupations n.e.c. <sup>18</sup>	924	Office Admin	2
4	Business sales executives	695	Retail and sales	3
5	Web design and development professionals	682	ICT	4
6	Chefs	673	Recreation, culture, sports, media	3
7	Managers and directors in retail and wholesale	631	Retail and sales	4
8	Managers and proprietors in other services n.e.c.	581	Legal, financial, property, other business services	3
9	IT business analysts, architects and systems designers	557	ICT	4
10	IT user support technicians	473	ICT	3
11	Design and development engineers	448	Engineering	4
12	Customer service occupations n.e.c.	441	Retail and sales	2
13	Sales accounts and business development managers	437	Legal, financial, property, other business services	3
14	Human resources and industrial relations officers	376	Legal, financial, property, other business services	3
15	IT operations technicians	375	ICT	3
16	Sales related occupations n.e.c.	367	Retail and sales	2
17	Marketing associate professionals	360	Legal, financial, property, other business services	3
18	Book-keepers, payroll managers and wages clerks	351	Legal, financial, property, other business services	2
19	Management consultants and business analysts	334	Legal, financial, property, other business services	4
20	Marketing and sales directors	325	Retail and sales	4

Source: Labour Insight, Burning Glass Technologies

<sup>&</sup>lt;sup>17</sup> 2nd quarter, 1 April 2015 to 30 June 2015. <sup>18</sup> n.e.c. – 'not elsewhere classified'

In the 2nd quarter 2015, 27,400 postings were advertised online for jobs in Oxfordshire.

- Nearly a fifth of all job postings and over a third of the top 20 are ICT jobs.
   Vacancies for programmers and software development professionals have consistently topped the occupational chart.
- 13% of jobs are in retail and sales and 12% are in 'other business services (e.g. administration, business managers)
- The top 3 broad sectoral groups for job postings consistently top in Oxfordshire over the past four years are 'ICT'; 'Legal, Financial, Property and Other Business professionals'; 'Retail and Sales'.

Table 4: ONS Skill level definitions

Skill Level	Usual Education/Training Competence	Typical occupations
4 – High	Degree level or equivalent	Professional and high level managerial positions
3- Upper Middle	Post-compulsory education but not to degree level	Associate professional, technical, trade occupations and proprietors of small businesses
2 – Lower Middle	Good general education in addition to work related training and work experience	Machine operation, driving, caring occupations, retailing, and clerical and secretarial occupations.
1-Low	General education and may involve some training	Postal workers, hotel porters, cleaners and catering assistants.'

• 82% of top 20 occupations require upper middle to high skill levels.

### What job titles lead demand in job vacancies?

Looking at vacancies by job title is, in many ways, more straightforward. These are the real life titles heading the job advert, rather than an occupational grouping of that information. In this analysis it is evident that ICT occupations in Programming and Software Development, for example, are spread over a number of varied job titles. In fact, there can be numerous titles for similar type jobs due to the specificity of the work being reflected in the title. Job titles also change over time as the nature of the work involved also changes. The table below shows the top 30 job titles in Oxfordshire to give an indication of the standardisation and popularity of job titles.

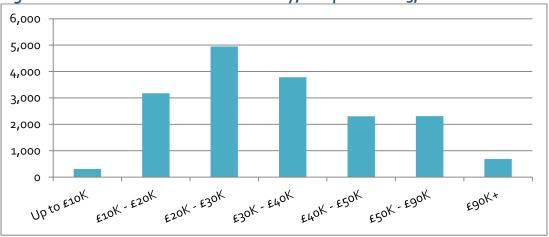
Table 5: Number of postings for job titles, 2<sup>nd</sup> quarter 2015, Oxfordshire

Table 5.	Number of postings for job titles	, 2 qualter 2015, OXIC	I
Rank	Title	Broad sectoral group	Job Postings
1	Registered Nurse	Health	280
2	Software Development Engineer	ICT	272
3	Chef	Recreation	262
4	Assistant Manager	Retail	249
5	Store Manager	Retail	245
6	Java Software Developer	ICT	232
7	Account Manager	Finance	214
8	Software Developer	ICT	193
9	Business Analyst	Other Business Services	191
10	Staff Nurse	Health	172
11	Web Developer	ICT	168
12	Sous Chef	Recreation	166
13	Asp .Net Developer	ICT	158
14	Sales Executive	Retail	155
15	Mechanical Design Engineer	Engineering	132
16	Sales Manager	Retail	132
17	Customer Service Advisor	Retail	129
18	Electronics Engineer	Engineering	127
19	Recruiting Consultant	Other Business Services	122
20	.Net Developer	ICT	121
21	Marketing Manager	Other Business Services	120
22	Administrative Clerk	Office Admin	117
23	Maintenance Engineer	Engineering	116
24	Social Worker	Health	111
25	Head Chef	Recreation	111
26	Sales Consultant	Retail	110
27	Php Developer	ICT	105
28	Accounts Assistant	Finance	101
29	Auxilliary Nurse	Health	100
30	Hgv2 / Lgv C Driver	Transport & Logistics	84

Source: Labour Insight, Burning Glass Technologies

### **Salary**

Figure 11: Distribution of advertised salary, 2<sup>nd</sup> quarter 2015, Oxfordshire



Source: Labour Insight, Burning Glass Technologies

- About a third of jobs advertised a salary between £20,000 £40,000 these include
  posts like nurses, other IT and business professionals, technicians and managers.
  Occupations found in the lower salary brackets tend to be customer service based,
  such as those in sales and retail, hospitality, child care and administration assistants.
- Occupations in the higher salary brackets are IT professionals with specialised knowledge, management consultants and business analysts and medical consultants.

### Graduate level jobs

Table 6 shows the top 20 'graduate' level occupations (requires a degree or equivalent or higher). Experience will also be essential at this level.

Table 6: Top 20 occupations at graduate level, 2<sup>nd</sup> quarter 2015, Oxfordshire

Rank	Occupation	No. of job postings	Broad Sectoral group	Oxfordshire Mean Advertised Salary	Sk	ill level
1	Programmers and software development professionals	358	ICT	£44,154	4	High
2	Design and development engineers	145	Engineering	£40,181	4	High
3	IT business analysts, architects and systems designers	112	ICT	£49,879	4	High
4	Business and related research professionals	103	Legal, financial, property and other business services	£33,135	4	High

5	Management consultants and business analysts	93	Legal, financial, property and other business services	£72,801	4	High
6	Biological scientists and biochemists	81	Science Professionals	£34,580	4	High
7	Business sales executives	73	Retail	£26,117	3	Upper middle
8	Journalists, newspaper and periodical editors	67	Recreation, culture, sports, media	£35,586	4	High
9	Managers and proprietors in other services n.e.c.	64	Legal, financial, property and other business services	£63,452	3	Upper middle
10	Information technology and telecommunications professionals n.e.c.	59	ICT	£43,710	4	High
11	Further education teaching professionals	56	Education and training	£34,076	4	High
12	Web design and development professionals	56	ICT	£39,965	4	High
13	Marketing associate professionals	50	Legal, financial, property and other business services	£27,734	3	Upper middle
14	IT operations technicians	49	ICT	£48,609	3	Upper middle
15	Sales accounts and business development managers	48	Legal, financial, property and other business services	£42,922	3	Upper middle
16	Nurses	42	Health	£33,412	4	High
17	Business and related associate professionals n.e.c.	42	Legal, financial, property and other business services	£47,654	3	Upper middle
18	Engineering professionals n.e.c.	42	Engineering	£38,596	4	High
19	Other administrative occupations n.e.c.	42	Office Admin	£32,066	2	Lower middle
20	Quality assurance and regulatory professionals	41	Legal, financial, property and other business services	£47,732	4	High

Source: Labour Insight, Burning Glass Technologies

- Software development occupations top the graduate level vacancy list with 39% of jobs in the top 20 in ICT. Legal, financial, property and other business service jobs make up 27% of the top 20 and Engineering 12%.
- 77% of graduate jobs vacancies in the top 20 require a high skill level.

### **Skills**

### What skills are required for current jobs?

Skills necessary to fulfil job vacancy requirements can be defined as hard and soft. Hard skills refer to the specific knowledge and technical skills set that are often obtained through a period of study or learning. The following word cloud shows some of the common hard skill requirements in Oxfordshire based on an analysis of current job vacancies.

Figure 12: Hard skills required by employers for job postings, 2<sup>nd</sup> quarter 2015, Oxfordshire<sup>19</sup>



Source: Labour Insight, Burning Glass Technologies

### Did you know?

1 in 5 employees say they struggle to sell their soft skills - yet 97% of businesses say soft skills are vital to the success of their business. Soft skills, also known as 'employability skills' refers to the personal attitudes and behaviours required in the workplace. Soft skills are reckoned to be worth over £88 billion in Gross Value Added to the UK economy each year, underpinning around 6.5% of the economy as a whole<sup>20</sup>. Lacking these skills can not only holds people back but can cause major problems for business and result in diminished productivity, competitiveness and profitability. Furthermore, the UK Commission for Employment and Skills identifies that soft skills are associated with between 33%-40% of all reported skills-shortage vacancies.<sup>21</sup>

<sup>&</sup>lt;sup>19</sup> The size of the skill recorded is proportionate to the number of job postings that require that skill

The Value of Soft Skills to the UK economy report, January 2015, p.3

http://www.backingsoftskills.co.uk/The%2oValue%2oof%2oSoft%2oSkills%2oto%2othe%2oUK%2oEconomy.pdf

The Value of Soft Skills to the UK economy report, January 2015, p.10 http://www.backingsoftskills.co.uk/The%20Value%200f%20Soft%20Skills%20to%20the%20UK%20Economy.pdf

While soft skills can cover a huge range of attitudes and abilities six skill clusters have been identified.

Table 7: Six Key Soft Skills Clusters

Six Key Soft Skills Cluste			
Communication skills	Effective listening  Accurate and concise	Communicate pleasantly and professionally	Ask good questions  Communicate
	communication	Effective written communication	appropriately using social media
	Effective oral communication		
Decision-making/ Problem solving skills	Identify and analyse problems	Creative and innovative solutions	Engage in life-long learning
	Take effective and appropriate action	Transfer knowledge between situations	Think abstractly about problems
	Realise the effect of decisions		
Self-management skills	Efficient work habits Self-starting	Sense of urgency to address and complete tasks	Adapt and apply appropriate technology
	Well-developed ethics and sense of loyalty	Work well under pressure	Dedication to continuing professional development
Teamwork skills	Productive as a team member	Maintains accountability to the team Works with multiple	Aware of and sensitive to diversity Shares ideas to multiple
	Positive and encouraging attitude	approaches  Punctuality and meets	audiences
		deadlines	
Professionalism skills	Effective relationships with customers, businesses and the public	Understands role and has realistic career expectations	Maintains appropriate decorum and demeanor
	Accept critique and direction in the workplace	Deals effectively with ambiguity	Selects appropriate mentors and sources of advice
	Trustworthy with sensitive information		
Leadership skills	Sees the 'big picture' and thinks strategically	Recognises and deals effectively with conflict	Motivates and leads others
	Recognises when to lead, and when to follow	Builds professional relationships	Recognises when change is needed, and contributes to the
	Respects and acknowledges contributions from others		change effort

The Value of soft skills to the UK economy, January 2015

Figure 13: Soft skills required by employers for job postings, 2<sup>nd</sup> quarter 2015, Oxfordshire<sup>22</sup>



Source: Labour Insight, Burning Glass Technologies

- Five times as many job vacancies in Oxfordshire ask for communication skills above all else.
- Planning, customer service, writing and being detail-oriented also feature highly.
- Every employer rates a 'positive attitude' as an important asset to have.<sup>23</sup>

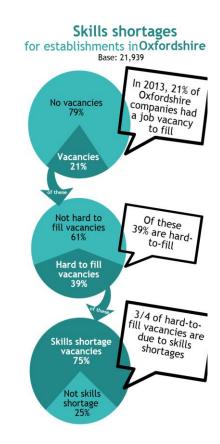
### What skills shortages or gaps are there?

In Oxfordshire there are both skills shortage vacancies, and skills gaps.

A **skills shortage** is where a business fails to recruit due to applicants not having the right skills or work experience. Employers state this is due to a number of factors, not least changes to the structure of the economy with more jobs becoming higher skilled and the advances in technology causing jobs to change rapidly.

In Oxfordshire, the impacts of skills shortage vacancies are<sup>24</sup>:

- Increase in workload for other staff (92% of companies said this)
- Difficulties in meeting customer service objectives (59%)
- Losing business or order to competitors (47%)
- Experiencing increase operating costs (44%)
- Difficulties introducing new working practices (43%)



<sup>&</sup>lt;sup>22</sup> The size of the skill recorded is proportionate to the number of job postings that require that skill

What Employers want report, p.4, http://www.whatemployerswant.org/wp-content/uploads/2014/10/What-Employers-Want-FINAL.pdf, [Accessed 16 July 2015]

<sup>&</sup>lt;sup>24</sup> UKCES Employer Skills Survey, 2013

Skills shortages are important to the careers agenda because if companies are unable to recruit then they can't function properly and grow and this can result in less output.

Oxfordshire has 24% of all vacancies which are skills shortage vacancies and these are most prominent in the Transport, Storage and Communications (41%); Business services (36%); Community Social and other activities (35%) and Wholesale and Retail (29%) sectors.

A **skills gap** is defined as when an employee does not have the right skills to be fully proficient in their role. Oxfordshire has 17% of establishments where staff are not fully proficient and this is most prominent in Education, Hotels and Restaurants and Manufacturing sectors.

The top 5 reasons for skills gaps in Oxfordshire are:

- New to the role (42% of establishments said this)
- Training only partially completed (33%)
- Staff lack motivation (29%)
- Training completed by performance not improved (27%)
- Introduction of new working practices (21%)

Skills shortages and gaps are concerning for employers nationwide. A recent education and skills survey conducted by jointly by CBI and Pearson education<sup>25</sup> has determined:

- Demand for more people with higher-level skills is expected to be particularly strong in sectors central to growth such as construction (+73%), manufacturing (+69%) and engineering, science and hi-tech (+52%)
- 55% of business are not confident there will be enough people available in the future with the necessary skills to fill their high-skilled jobs
- There are currently widespread difficulties in recruiting people with STEM skills at every level, from new entrants to train as apprentices (20%) to people with more than five years' experience of STEM related work (32%)
- 52% of businesses expect to see a shortfall in experienced STEM-skilled staff
- While most businesses view the overall skill levels of their present workforces as satisfactory or good, half of businesses report they are aware of problems among at least some of their employees in basic literacy (50%), numeracy (50%) and IT skills (46%).

-

<sup>&</sup>lt;sup>25</sup> Inspiring growth: CBI/Pearson education and skills survey 2015, Chapter 3, p.18

### **Entry level jobs**

Entry level jobs, in this context, are defined as those offering a salary of £20,000 or less or the jobs that would be considered the first step on the employment ladder.

Table 8: Top 20 occupations at entry level, 2<sup>nd</sup> quarter 2015, Oxfordshire

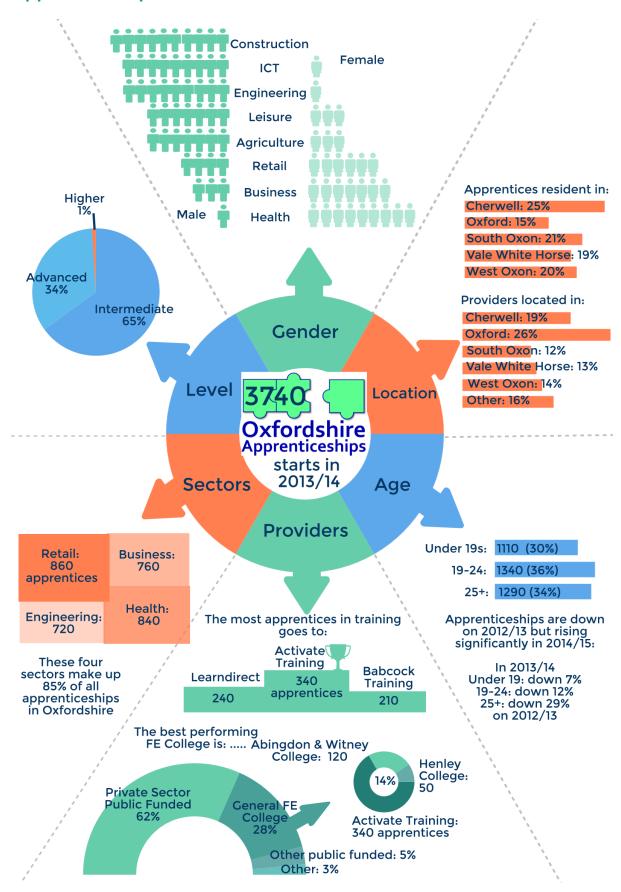
Rank	Occupation title	No. of job postings	Broad sectoral group	Oxfordshire Mean Advertised Salary		Skill level	
1	Other administrative occupations n.e.c.	354	Office Admin	£16,979	2	Lower middle	
2	Customer service occupations n.e.c.	205	Retail	£16,141	2	Lower middle	
3	Chefs	180	Recreation, culture, sports, media	£16,189	3	Upper middle	
4	Business sales executives	129	Retail	£16,068	3	Upper middle	
5	Sales and retail assistants	116	Retail	£15,067	2	Lower middle	
6	Care workers and home carers	113	Care, social work, young people, community	£16,804	2	Lower middle	
7	Receptionists	87	Office Admin	£15,386	2	Lower middle	
8	Elementary construction occupations	77	Construction	£16,879	1	Low	
9	Elementary storage occupations	75	Transport, logistics, storage	£15,738	1	Low	
10	Cleaners and domestics	72	Cleaning, caretaking, security	£14,913	1	Low	
11	Nursery nurses and assistants	71	Education and training	£15,248	2	Lower middle	
12	Sales administrators	64	Retail	£17,560	2	Lower middle	
13	Sales related occupations n.e.c.	61	Retail	£15,487	2	Lower middle	
14	Book-keepers, payroll managers and wages clerks	57	Legal, financial, property and other business services	£18,248	2	Lower middle	
16	Kitchen and catering assistants	56	Recreation, culture, sports, media	£15,301	1	Low	
15	IT user support technicians	56	ICT	£17,009	3	Upper middle	

17	Human resources and industrial relations officers	44	Legal, financial, property and other business services	£17,612	3	Upper middle
18	Waiters and waitresses	43	Recreation, culture, sports, media	£14,729	1	Low
19	Nursing auxiliaries	35	Retail	£15,933	2	High
20	Telephone salespersons	42	Retail	£17,944	2	Lower middle

Source: Labour Insight, Burning Glass Technologies

- Administrative occupations account for nearly a quarter of jobs in the top 20 in office admin. However the retail sector accounts for another third.
- 62% of entry jobs vacancies require a lower middle skill level meaning a good general education and some work experience is sought. Only 21% require a post-compulsory level of education and 17% of vacancies require little or no experience or qualifications.

### **Apprenticeships**



Apprenticeships provide an opportunity for young people to start paid work in an occupation of their choosing while receiving on and off the job training. A successful apprentice will receive a nationally recognised qualification on completion of their contract.

Apprenticeships, and vocational training generally, have been given a big boost with significnt annoncements from the Chancellor in his summer Budget 2015. These include:

- A pledge to create three million apprenticeships by 2020 across the UK
- Give the term 'apprenticeship' legal protection to strengthen its reputation and to ensure the same legal status as university degrees. This is proposed to be announced in the Enterprise Bill to be introduced to Parliament this autumn.

Also high on the agenda are new funding mechanisms aimed at driving more apprenticeships and the creation of higher apprenticeships.

### What are the current apprenticeship opportunities?

In June 2015 there were 309 unique apprenticeship postings advertising 468 vacancies that were open to applications. Table 9 show the wide range available in Oxfordshire.

Table 9: Apprenticeship job vacancies by framework tier 2, June 2015, Oxfordshire

Apprenticeship Framework	No. of vacancies
Retail	83
Business and Admin	54
Customer Service	38
Catering and Professional Chefs	36
Hospitality	25
Children/Young People's Workforce	21
Contact Centre Operations	20
Hairdressing	20
Electrotechnical	17
Business Innovation and Growth	12
Plumbing and Heating	11
Horticulture	11
IT, Software, Web & Telecoms	11
Warehousing and Storage (Logistics)	10
Engineering Manufacture (Operator & Semi skilled)	10
Health and Social Care	10
Engineering Manufacture (Craft and Technician)	9
Construction Building	9
Accounting	8

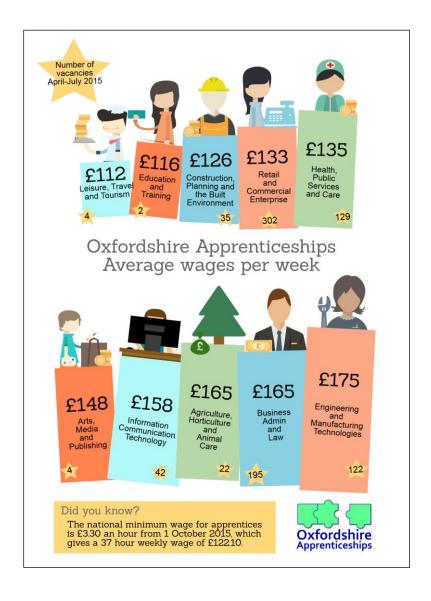
Apprenticeship Framework	No. of vacancies
Marketing	3
Leisure Operations	2
Health - Clinical Healthcare	2
Health - Optical Retail	2
Trade Business	2
Property Services (Asset Skills)	2
Equine	1
Social Media and Digital Marketing	1
Management	1
Heating and Ventilation	1
Laboratory and Science Technicians	1
Construction Specialist	1
Vehicle Fitting	1
Supporting Teaching and Learning	1
Project Management	1
Landbased Engineering	1
Hospitality Management	1
Signmaking	1
IT Application Specialist	1

Vehicle Maintenance and Repair	7
Print and Printed Packaging	6
Vehicle Parts	3
Health - Dental Nursing	3
Sales and Telesales	3

Trees and Timber	1
Banking	1
Vehicle Body and Paint	1
Food and Drink	1
Improving Operational Performance	1

Source: National Apprenticeship Service for Oxfordshire, https://apprenticeshipvacancymatchingservice.lsc.gov.uk/)

- Retail and commercial enterprise apprenticeships lead demand with posts as chefs, front of house assistants and hairdressing top.
- 74% of vacancies were at intermediate level, 20% were advanced, 3% higher and 3% were traineeships.
- Weekly wages ranged from £43 to £309, with the median average at £150.
- A third of apprenticeships were based in Oxford City; Chipping Norton was the next highest location of vacancy with 10% and Kidlington third with 9%.
- The Oxfordshire apprenticeships website (www.oxfordshireapprenticeships.co.uk) provides a live vacancy feed for the current apprenticeship vacancies in Oxfordshire.



### Where will the new apprenticeships be created?

Developments in the pipeline (Westgate Shopping Centre redevelopment, new housing at Barton, residential developments in Bicester, and warehousing at Didcot) indicate construction and logistics are key areas for growth for apprenticeships. With the growth in higher apprenticeships he aim is to see more high tech industries offering apprenticeship opportunities.

In his recent budget statement the Chancellor also said public bodies will be given targets to boost apprenticeships so we shall see more opportunities across the sector including health, police, prisons, defence, the care sector and more.

### Recent research<sup>26</sup> has found:

- apprentices are likely to earn more during their lifetime than contemporaries with fewer qualifications;
- just five per cent of apprentices are unemployed a year after starting their job hunt compared with 16 per cent of graduates and 13 per cent of those with A-levels
- More than a third of apprentices who found employment were working in the skilled trades in jobs such as electrician or plumber.

### **Employment and Skills Plan**

Oxfordshire Employment and Skills Plans (ESPs) are a vehicle, agreed between the local planning authorities, developers and potential 'end use' occupiers, to provide training and skills development to local residents, the ultimate aim being to optimise opportunities for local residents to access the new jobs that will be created either during the construction phase or when the buildings are occupied.

The developer and occupiers benefit from being able to draw from the local workforce, including those furthest from the labour market, crucial in such a tight labour market.

### Did you know?

A number of other ESP opportunities are currently being discussed including:
Barton Housing

- Didcot warehouses (2000+ jobs)
- Northern Gateway
- Oxford Science Park
- 474 Cowley Road
- Templar's Square development
- Churchill Hospital
- Post Office Sorting Depot

<sup>&</sup>lt;sup>26</sup> UK labour market insights - the entry-level dilemma. A Totaljobs.com report prepared by the Institute for Public Policy Research, November 2014

Three ESP's have been agreed in Oxfordshire since 2014:

**Westgate Centre redevelopment (Oxford city centre):** Working with Land Securities & Crown Estates there are two ESP's on the development – the first covering the construction phase –the second the 'end use' phase, with 700 training and employment opportunities supported across both..

Developer	Land Securities/Crown Estate	
Main contractor	Laing O'Rouke	
Number of jobs	Up to 600 jobs during construction	
	Up to 3,250 jobs end use	
	ESP will support in excess of 700 training	
	and job outcomes	
Timescale	Ground clearance and demolition	
	commenced in January 2015	
	Centre will open in Autumn 2017	
	`End use ESP' to run post opening	
Examples of outcomes – construction		
phase:		
Sector Based Work Academies	60 of the most marginalised	
Traineeships	6o young people completing training	
Promote and support local community	50 days per year	
Supporting chosen local charities	3 charities during construction phase	
Apprenticeships	10 during construction	
Supporting employment for young people	20% of those working on site (full time)	
(between 18-25 years old)		
Supporting local Social Enterprise	2 social enterprises supported	

**Barton Park (Oxford):** The ESP for this garden suburb housing development providing over 800 new homes will commence in Autumn 2015. The development will be implemented over six phases and will include a variety of construction, retail and community jobs, with the developer, Grosvenor Estates working as part of a partnership with the City Council.

**Exemplar, North West Bicester:** The Exemplar is just the first phase of a Masterplan to create up to 6,000 new homes in North West Bicester. This phase is a showcase of ecodevelopment providing 393 zero carbon homes, a primary school, a local shop, an eco-pub and a community centre. The ESP will be drawn up by lead developers and affordable housing provider A2Dominion, in partnership with Cherwell District Council and will continue to evolve as NW Bicester is developed further over the decades to come and will relate, for example, to the new Bicester Studio School due to open in September 2016, other providers of skills and training, and further employers.

# Oxfordshire's Future



Predictions for Oxfordshire's future to 2030

The Digitisation impact to the labour market will be fast and transformative.

Technology will assist workers of the future.





Medium skill level and middle income jobs will decline.



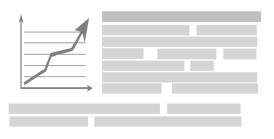


Growth expected in higher skilled, managerial and development jobs and lower skilled, caring and service jobs.

Oxfordshire's growth sectors:

Life sciences
Space
Advanced Engineering
Digital Creative
Tourism
Energy

Ambitions for a further 75,000 new jobs by 2030.



**Emerging sectors:** 

Low carbon as a response to climate change



Technologically assisted healthcare

Innovations in digital and creative



Service sector to experience most growth.



Labour Market Bulletin: Summer 2015

### Future Jobs – jobs and skills in 2030

The world of work is changing. In an increasingly competitive world, and volatile one too, the skills base of a nation will be crucial to a country's success in delivering innovation, enterprise and sustainable growth.

# The pace of technology change is increasing exponentially

It took more than 70 years for telephones to reach 50% household penetration, compared with 28 years for radio, and 10 for internet access<sup>1</sup>. Following this trend, the rate of technology adoption should continue to accelerate so that each new technology outpaces the adoption of its predecessor, and the future will see adoption rates measured in weeks and days rather than years. Google+, the new social media tool from Google, took only 16 days to reach 10 million users, compared with 780 days for Twitter and 852 days for Facebook.

Source: The digitisation of everything, Ernst & Young

We know the number of jobs requiring higher skill levels is increasing and the number of unskilled jobs is declining.

The UKCES Future Work<sup>28</sup> project estimates there will be around 1.9 million additional jobs by 2022 compared with 2012. As a result of continued fiscal retrenchment we will see further cuts to public services. The rebalancing of the economy towards more private sector jobs does appear to be happening. Manufacturing too is projected to see further decline. The main source of growth is from the service sector. Within this sector, the main driver for growth will be business and other services, creating over 1 million jobs.

**Digitisation** and associated technological development will continue to transform our working lives in ways that cannot be completely predicted. We do know however, it will be fast and a step change greater than when the internet was invented and adopted with 'Generation Y' – those born 'plugged in'-

Certainly, there will be new jobs, and others will disappear as more job functions become automated.

in the driving seat<sup>27</sup>.

# How digitisation might impact on jobs

In the health sector we could see care workers assisting with diagnostic home-based and devices. monitoring the construction sector, increasingly sophisticated building technologies, such as home automation, will demand new installation, maintenance and repair skills, while architects and building managers use cradle-tograve digital modelling in their projects, to both design and build physical structures.

**Did you know?** By 2020, over 50 per cent of the workforce is expected to be 'Generation Y' – people who have grown up connected, collaborative and mobile.

<sup>&</sup>lt;sup>27</sup> Ernst & Young, The digitisation of everything, 2011

<sup>&</sup>lt;sup>28</sup> The Future of Work: Jobs and skills in 2030, Evidence Report 84, February 2014, UKCES Some key trends that will shape jobs and skills

### Key global work trends

Technology will pervade every work	Interconnectivity and collaboration
environment  Digitalisation impacts on jobs and skills at all levels, all sectors  Winners and losers  Continuous up-skilling and adaptation fundamental	Fluid, interconnected, network-oriented jobs  Challenge of developing the skills of a virtual, flexible workforce  Convergence between sectors, stimulates greater innovation between disciplines and leads to hybridisation of skills
Increased individual responsibility  Greater worker flexibility means individuals shoulder responsibility, including for skills development  Self-management skills  Personal agility and resilience vital, especially for young people	An hourglass shaped, two-tiered labour market  Highly-skilled minority enjoy strong bargaining power, low skilled do not  Decline of traditional roles in middle of the skills and earnings range e.g. admin, manual  New jobs fill the middle ground, different entry routes and skills requirements

On skills, Future Work suggest a continued trend in favour of more highly skilled occupations – such as managers, professionals and associate professionals (some 2 million jobs). At the same time we will also see some growth in less skilled occupations too – caring, personal and other service jobs but a decline in blue collar jobs.

### UKCES The Future of Work – seven sectors and implications for work

Sector	Technological and other drivers of change
Health and Social Care	<ul> <li>Significant increase in the number of jobs in health and social care due to demographic factors (ageing population), social trends (working parents requiring childcare), and opportunities that will emerge with investment in medical research and innovation.</li> <li>The adoption of technological innovations within the health and care sectors is expected to change the profile of many jobs. Migrant workers are expected to fill high- and low-skilled job gaps. In these sectors, there is an anticipated tension between an increase in demand for social and healthcare services, and constraints on public spending. Technological innovation and</li> </ul>

	new business/delivery models provide opportunities to address these challenges. For example, the introduction of personal healthcare budgets would enable people to select preferred healthcare options and services.
Professional and Business Services Sector	<ul> <li>Developments in the professional and business services sector are likely to be linked closely to globalisation and internationally traded services (growth in the East, for example, creates demand for this sector with new customers and potentially new products).</li> <li>The adoption of technological innovation, and providing solutions to new or increased social demands (such as an ageing population).</li> <li>One of the major influences is likely to be the automation of professional jobs and the impact of ICT using smart algorithms. Undergoing constant change, the structure, management and strategies of businesses in this sector, and supported by this sector, are likely to become increasingly flexible, diverse and global.</li> </ul>
Retail and Logistics	<ul> <li>Jobs and skills in the retail and logistics sector will be impacted by the increased use of ICT in work processes (both back office and customer facing), the continued impact of the Internet in multi-channel retailing, and social consumption patterns (including satisfying 'green' consumer choices).</li> <li>Overall, a growing population will probably drive growth in the demand for both low- and high-skilled jobs within the retail and logistics sector. Data and technology enable new service models for retailers, allowing for increasing sophistication in segmentation and customisation through customer profiling.</li> </ul>
Education	<ul> <li>The development of market-based and employer focused education is expected to become an increasingly important driver for the sector.</li> <li>Social trends and enabling technologies create a need for increasingly personalised modes (in structure and content) for learners. This is particularly the case for Further Education and Higher Education, where higher fees focus the minds of learners on employability questions and return on investment.</li> <li>Online and blended learning techniques will become more widespread and sophisticated to match the expectations of feepaying learners. It is anticipated that there will be an increase in demand for work-based learning, which offers the flexibility required by employers and individuals. With increasing competition and public spending constraints on core funding in the Higher Education sector, new entrants (private providers) may find it easier to adapt to the new environment, with a different business model, a lower cost base and a very focused curriculum.</li> </ul>

Manufacturing	<ul> <li>Global competition, technology adoption and international trade levels will have a formative influence on the manufacturing sector in the UK to 2030. Whilst a full rebalancing of the economy (where manufacturing re-assumes a larger proportion of the economy) is less likely, a stabilisation in manufacturing employment levels is plausible. Within a globalised production environment, the demand for low-skilled labour in UK manufacturing will continue to decrease.</li> <li>One of the major uncertainties facing the sector is the degree to which additive manufacturing or 3D printing will revolutionise production and supply chains. The manufacturing sector in the UK will be challenged to upgrade its innovation capacity – and move beyond achieving efficiency (through lean methods). Increasing concern over resilience of supply chains is likely to drive business strategies and may stimulate near-shoring and re-shoring of manufacturing activity to the UK.</li> </ul>
Creative and Digital Sector	<ul> <li>Changes in technology are expected to drive productivity and the development of new business models in the Creative and Digital Sector. The sector will have a significant impact on other sectors as digital and creative solutions are applied in different business processes and fields. It is anticipated that a growth in virtual collaboration and outsourcing, together with the increasing need for flexible project management, will also shape the work environment</li> </ul>

### **Expansion demand - emerging sectors**

Looking ahead to the jobs that may arise over the next decade or longer is of course fraught with challenges as some changes cannot be predicted. However, emerging sectors that commentators say will change how we work include:

Low carbon - goods and services in response to climate change IT – cloud computing, 3D printing and big data Healthcare – technological advancements Social care – responding to demographic changes Creative and digital industries – driven by continued creative innovation

### **Growth sectors - Oxfordshire**

Oxfordshire's Strategic Economic Plan (SEP) indicates that up to 75,000 new jobs could be created between now and 2031<sup>29</sup>. The Plan seeks to ensure that Oxfordshire becomes one of the top performing, most innovative areas in England. Key sectors expected to deliver this growth are:

- Life sciences and medical instruments
- Space and satellite applications
- Advanced engineering including cryogenics (Europe's largest cluster), advanced materials, nano-technology and motorsport
- Also, publishing, energy and environment, creative industries and tourism

### Life Sciences and medical instruments

The life sciences, or BioCluster, in Oxfordshire is one of the largest and most prominent in Europe with over 180 companies in the research and development field plus more than 150 companies in associated industries, and over 10,000 employed in manufacturing of pharmaceutical or medical instruments and in associated research and development.

### Did you know?

The University of Oxford and Oxford Brookes University provide an average of just under 3,000 1<sup>st</sup> and Higher Degree qualifiers in life science, medicine and associated science based subjects.

Emerging life sciences work in telehealth, regenerative medicine, precision medicine or Genomics, and therapeutic.

Oxford University is a leading global centre for biomedical research, industry support/collaboration and Oxford University Hospitals NHS Trust operates four primary hospital sites with comprehensive teaching and research capabilities as well as strong industry partnerships.

### Space and satellite applications<sup>30</sup>

The UK has a strategy to quadruple its performance in the Space and Satellite sector by 2030 and the development of the Space Cluster at Harwell Oxford is at the heart of these

Oxfordshire Strategic Economic Plan, http://www.oxfordshirelep.org.uk/content/strategic-economic-plan The "Space Economy" comprises several and interdependent economic activities that are required to facilitate the exploration of space and the exploitation of the opportunities that it currently enables – or might enable in the near or distant future. This then covers space manufacture, space operations and space applications.

efforts with local and national partners working together to achieve the UK Space Agency's UK Space Gateway programme.

Space is strategically important, with major potential for economic growth, scientific advancement and societal benefits.

Oxfordshire's scientific research and space sectors are leading the way in major collaborative science projects and, within Science Vale UK south of Oxford, have created a unique environment where state-of-the-art publicly funded scientific facilities operate

### Did you know?

The space sector has grown by 8.6% per year since 2010 and is now valued at £11.8 billion.

The aim in Oxfordshire is to capture 10% of the global market by 2030 (it's currently 6-7%), taking it to a value of £40bn.

It now directly employs 37,000 people and is estimated to support over 115,000 jobs in total with 10,000 centred in and around Harwell

People working in this sector are highly qualified with 75% holding a degree or higher.

Source: The Case for Space, July 2015, LSE

alongside industrial research and development.

The cluster of space activity at Harwell Oxford is expanding rapidly, including STFC's long-established RAL Space centre, the Satellite Applications Catapult, ESA's European Centre for Satellite Applications & Telecoms (ECSAT) and a thriving ESA Business Incubator, serving as a major attractor for a spectrum of companies from start-ups to large corporates.

### Advanced automotive & engineering

### Did you know?

BMW has its Mini plant in Cowley, where 2.5 million cars have been produced since the new Mini was launched in 2001.

Over twice the proportion of people in Oxfordshire are employed in the manufacture of motor-vehicles compared to the proportion for England. There are over 24,000 people employed in manufacturing.

Eight of the eleven Formula 1 teams are based in the UK, three of these in Oxfordshire in Williams, Lotus and Haas.

Oxfordshire is at the heart of 'Motorsport Valley' and ideally located for car and engine plants. This has led to a wealth of locally based world-class design, precision and high performance engineering companies and the creation of a cluster of supply chain companies to feed the industry.

Innovation in areas such as alternative powertrain and 'lightweighting' are derived from the specialist R&D developments in Formula 1 technologies and local companies are

developing new technologies, particularly in electronics, intelligent mobility and lightweight materials.

Both Oxfordshire universities are undertaking world-changing research and development in automotive technology. The Mobile Robotics Group at the University of Oxford has been at the forefront of autonomous vehicle; including the Nissan Leaf electric car and the LUTZ Pathfinder pods. Oxford Brookes University has a strong presence in automotive technology with its Cognitive Robot Laboratory, which has sensor expertise in autonomous vehicles and has considerable expertise in fuel efficiency and low emission engines. Brookes also deliver a range of undergraduate and higher degrees in automotive and motorsport subjects.

# This issues job profile:

### Focus on Digital and Creative

This sector expands across a broad range of activity and companies and includes: television production through to software development; social networking tools and e-commerce; design to advance digital hardware innovation; and includes advertising and marketing communication companies, electronic publishing, computer games developers, computer programming and consultancy; and broader information and communication technology industries.

The digital and creative sector is an important part of the Oxfordshire economy. 31,000 people, or 9% of employees, currently work in the creative and digital sector in Oxfordshire<sup>31</sup>, which has grown by 46% since 2002.<sup>32</sup>

Nationally, the sector as a whole is predicted to outperform all other occupational categories<sup>33</sup> with an additional 1.2 million jobs forecast to 2022 in the UK (from growth and replacement jobs – this is about half the current workforce.

"Oxford has an exciting future. With a critical mass of talent emerging from world-leading universities, it is fast becoming an innovation hub for specialist areas such as systems design and integration."<sup>34</sup>

Oxford City is recognized as one of the UK's top 10 'hot-spots' for creative industries (NESTA, 2012) and is the UK's largest centre of publishing outside London. Digital strengths are in cyber security, Big Data, publishing and gaming; medical technologies & medical devices; automotive & Formula 1; space related technologies and electronics.

Outside of London, Oxfordshire has the biggest creative employee community and a fast growing digital sector.

78% of creative media workforce is educated to degree level – just over half of these were in a creative media related subject.

www.creativeskillset.org, 2014

56% found creative jobs by informal means such as word of mouth or social media.

www.creativeskillset.org, 2014

<sup>&</sup>lt;sup>31</sup> ONS, Business Register Employment Survey, 2013. Creative includes, 61-3 & 95 2 digit SICo7 codes. Digital defined as 58-60, 73-4, 90-1.

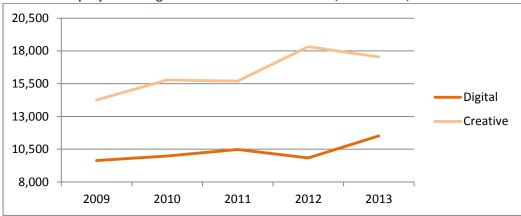
<sup>&</sup>lt;sup>32</sup> Compared to 26 per cent growth across all sectors of the economy, UKCES Sector insights: skills and performance challenges in the digital and creative sector, 2015 [Accessed 15 June 2015]

<sup>&</sup>lt;sup>33</sup> http://www.ukspa.org.uk/blog/15/02/digital-%E2%80%98clusters%E2%80%99-driving-growth-across-uk Accessed on 23 June 2015

<sup>&</sup>lt;sup>34</sup> Gerard Grech, CEO of Tech City UK, January 2015 http://www.wired.co.uk/news/archive/2015-01/16/digital-oxford

### The digital and creative employee split

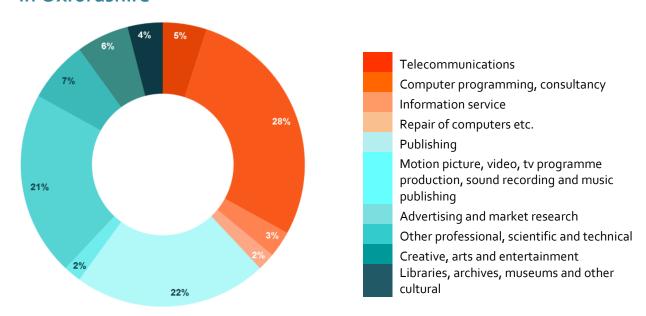
### Count of employees in Digital and Creative sub-sectors, 2009-2013, Oxfordshire



94% of companies in the digital creative sector are micro companies, that is o-9 employees ONS IDBR, 2014 Computer programming and consultancy make up 74% of the digital sub-sector occupations in Oxfordshire and is the fastest growing occupation area. Publishing and advertising/market research make up 74% in the creative sub-sector.

In terms of employers in Oxfordshire, there has been a 24% increase in new digital companies incorporated between 2010 and 2013.<sup>35</sup>

# The sub sectors of digital and creative employment in Oxfordshire



The future will see a greater fusion between the creative and digital sectors with many of the employment lines above blurred.

<sup>&</sup>lt;sup>35</sup> http://www.techcityuk.com/wp-content/uploads/2015/02/Tech%20Nation%202015.pdf?hootPostID=e58563ffc7df88452825ba4b2c3aa297

### **Digital Creative companies**



### Occupations<sup>36</sup>, pathways and skills

As creative jobs are digitised, the digital and creative roles increasingly cover a broad range of occupational groups. The following table shows the mean average advertised salaries for occupations that include digital and creative roles for June 2014 – June 2015.

Occupation title	Mean Advertised Salary in Oxfordshire
Advertising accounts managers and creative directors	£32,750
Graphic designers	£32,969
Photographers, audio-visual, broadcasting equipment operators	£33,218
Telecommunications engineers	£34,745
IT engineers	£34,938
Arts officers, producers and directors	£39,665
Web design and development professionals	£45,498
Programmers and software development professionals	£50,472
IT specialist managers	£51,247
IT business analysts, architects and systems designers	£53,993
IT project and programme managers	£60,199

Digital Creative gross median weekly earnings were £559 in 2014, compared to the national average of £418, but, where separated, the digital side is more lucrative than the creative. UKCES

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<sup>&</sup>lt;sup>36</sup> http://www.prospects.ac.uk/types\_of\_jobs.htm

Job titles can refer to the same type of work in this sector. For example IT, Software, Systems, Web, Applications developers or designers could, in fact, be similar roles. Posts most in demand are digital based with employers citing skills shortages in some areas. There is more competition for creative based roles.

Systems	Ana	lyst
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Analysts use computers to design IT solutions, or adapt, enhance or modify existing systems to improved business efficiency and productivity.

They examine existing IT systems and business models; analyse systems requirements; undertake product development; implement, configure and test feasible solutions. Technical expertise and clear insights into business practice required. Junior analysts start on about £20,000.

### Applications / Systems developer

Systems developers maintain, audit and improve organisational support systems by working on the internal operations of computers, using existing systems or incorporating new technologies to meet particular needs, often as advised by a systems analyst or architect. They test both hard and software systems, and diagnose and resolve system faults.

The role also covers writing diagnostic programs and designing and writing code for operating systems and software to ensure efficiency. When required, they make recommendations for future developments. Depending on the type of organisation, developers can become either systems or applications specialists. Salaries generally start in excess of £22,000 – usually at graduate level.

Vacancies, June 2015	No. of postings
Software developer	167
Systems Analyst	15
Graphic Designer	14
Web designer	12
Art Officer	0

43% of creative workers are self-employed so "young people now need to think about making a job and not simply taking a job".

Robert West, www.fe.news.co.uk

26% of digital workers were female, substantially lower than the national average of 47% UKCES

8% of workers are nonwhite in creative sub-sector, compared to 11 per cent across the economy UKCES

The creative sector is unlikely to be at risk from automation. 87% of creative occupations are considered low risk.

www.fe.news.co.uk

### **Graphic designer**

Designers create design solutions for a visual impact, be it for websites, advertising, posters, books or corporate identity. Usually working to a brief and developing ideas to meet the clients' needs. Junior designers start between £15,000 – £19,000 depending on location.

# Art officers / Producers (Film, TV and Video)

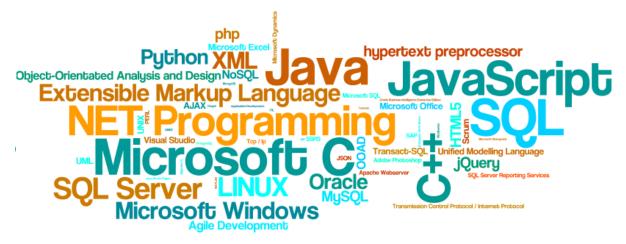
Arts officers oversees projects from conception to completion and are usually involved in all parts of the process, from organising event / shooting schedules, financing, compliance with regulations and troubleshooting. Starting as an assistant producer would pay from £18,000

### Web designer

Web designers plan, create and code web pages using technical and non-technical skills, so how a website works as well as what it looks like. Designers can also be responsible for maintenance of the site. Starting salary between £18-24,000

### **Skills**

ICT skills required in creative digital, Oxfordshire, 2015<sup>38</sup>



A study carried out on behalf of O<sub>2</sub> in 2013 found that Britain will need 750,000 skilled digital workers by 2017 – and if we can't support that growth, it could result in costing the UK as much as £2bn each year. <sup>39</sup>

Rapid technological advances are creating digital skills shortages and gaps. This can present a problem for ICT graduates as their knowledge can become quickly out-of-date. Evidence suggests students should not specialise too early.<sup>40</sup>

<sup>&</sup>lt;sup>38</sup> Labour Insight – based on current vacancies

<sup>&</sup>lt;sup>39</sup> 'A UK digital skills gap looms', 18 Aug 2014, http://www.theguardian.com/media-network/media-network/blog/2014/aug/18/uk-youth-shortage-digital-skills [Accessed 28 Jul 2015]

<sup>&</sup>lt;sup>40</sup> http://www.computerweekly.com/news/2240238003/Computing-teachers-need-more-training-say-students [Accessed 30 June 2015]