

Datasheet: Tech graduates

Introduction

This data sheet provides an analysis of qualifiers and destinations data collected by HESA (the Higher Education Statistics Agency) for the period 2013/14 focussing in particular upon new graduates from tech courses i.e. IT (computer science) and telecoms courses.

Key findings

- There were 777,600 qualifiers from UK HEIs in 2013/14 of which 28,400 (3.6%) had followed a tech related course. Of these, 19,600 (69%) qualifiers were of UK domicile and amongst this group 70% (13,700) had gained an undergraduate degree.
- The majority (91% or 12,500) of those gaining an undergraduate degree in a tech discipline did so via full-time study and of these 83% (10,400) were new graduates (i.e. those aged 24 or below).
- Just 16% of new graduates from tech courses were female compared with 44% of new graduates as a whole.
- The proportion of new tech graduates achieving a higher second or above (70%) was five percentage points below the average across all disciplines (75%).
- Almost eight in ten new graduates from tech courses were in employment six months after leaving HE (78%) compared with just over seven in ten (73%) for new graduates as a whole.
- Six in ten new tech graduates that were in work post study were in tech roles (60%) and of these just over one half (54%) said the main reason for taking this positions was that it 'fitted their career/was exactly the type of work they wanted'.
- More than six in ten (63%) new tech graduates working in tech positions stated that their qualification was a formal requirement for the job and just over one half (51%) thought that from an employer perspective, the subject studied was the most important aspect of their course.
- Around nine out of ten (87%) new tech graduates working in tech positions stated that their HE study had prepared them well or very well for work.
- Whilst the proportion of new tech graduates continuing their studies six months after leaving HE was just half that of new graduates as a whole, nine in ten thought their course had prepared them 'well' or 'very well' for further study.
- The unemployment rate amongst new graduates from tech courses in 2013/14 was 10% compared with a figure of just 5% for new graduates as a whole.

About the Tech Partnership

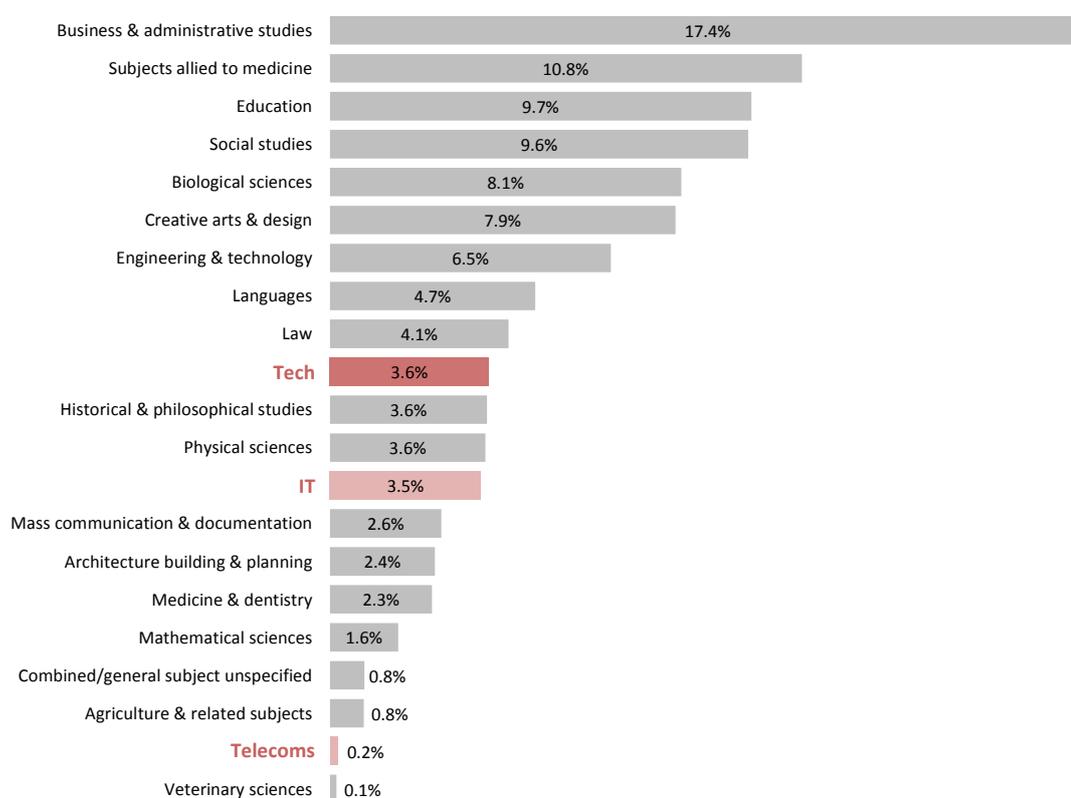
The Tech Partnership is a growing network of employers, collaborating to create the skills for the digital economy. It acts for the good of the sector by inspiring young people about technology, accelerating the flow of talented people of all backgrounds into technology careers, and helping companies to develop the technology skills they need for the future.

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1 UK qualifiers – an overview

During the year 2013/14 just under 800,000 people were awarded qualifications from UK Higher Education Institutions (HEIs) and amongst these, 28,400 (3.6%) gained an award in a tech related discipline - 3.5% in IT (Computer Science) and 0.2% in Telecoms.

Figure 1: Qualifiers from UK HEIs by subject, 2013/2014



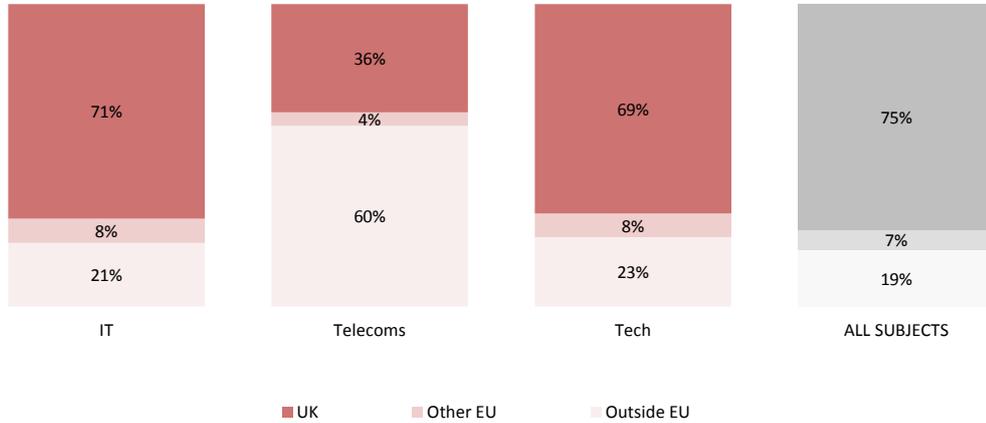
Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

2 UK qualifiers by domicile

As with other subjects, the majority of those gaining tech qualifications from UK HEIs in 2013/14 were of UK domicile¹ (69% or 19,600) though the proportion of tech qualifiers hailing from the UK was notably lower than the average for all disciplines (75%). This was primarily due to the relatively low proportion of UK qualifiers achieving telecoms awards (just 36% of which were from the UK) and was particularly apparent at post graduate level i.e. only 15% of telecoms post graduate qualifiers were UK domiciled compared with 54% of all qualifying at this level.

¹ England, Scotland, Wales, Northern Ireland, Isle of Man and Channel Islands

Figure 2: Qualifiers from UK HEIs by subject and domicile, 2013/2014



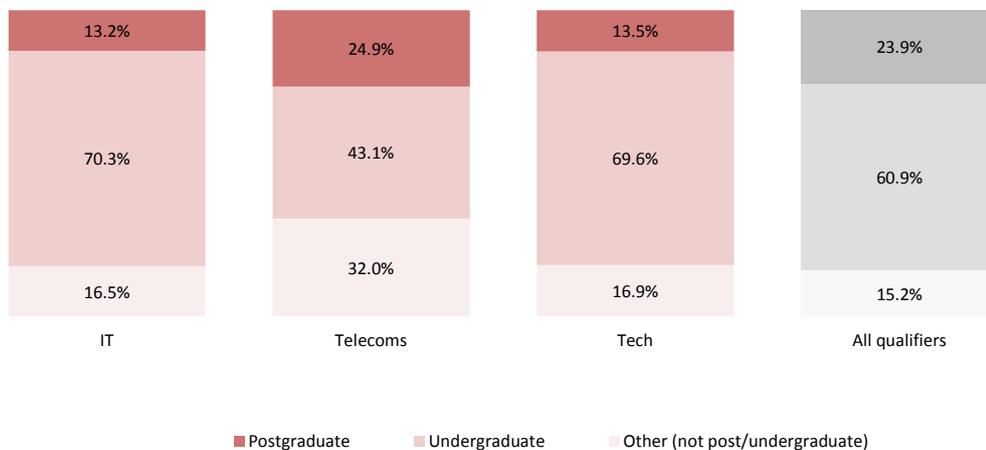
Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

3 Qualifiers by level of study

The vast majority (85%) of UK qualifiers (i.e. UK domiciled) from HEIs in 2013/14 had studied for either an undergraduate degree or post-graduate level qualification and this was also the case for those qualifying in a tech discipline (83%). More specifically, 14% of tech qualifiers (2,700) were seen to have taken a course at post-graduate level whilst 70% (13,700) had taken undergraduate courses.

As illustrated in the chart below, the distribution of telecoms qualifiers was notably different from that of IT/other courses with a much lower proportion of qualifiers obtaining awards at undergraduate degree level.

Figure 3: UK qualifiers by subject and level of study, 2013/2014



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

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4 Qualifiers by mode of study

Amongst UK qualifiers obtaining an award at undergraduate level, the vast majority (90% or 354,000 qualifiers) will have studied on a full-time basis and this was also true for those obtaining tech awards (91% or 12,500 qualifiers) be they IT or telecoms focussed.

5 Qualifiers by age

More than eight in ten (83%) tech qualifiers from full-time undergraduate courses were aged 24 or under (10,400 in total) – a slightly lower proportion than that associated with all qualifiers of this nature (85%).

6 Qualifiers and new graduates – a summary

The previous sections provided a contextual breakdown of UK qualifiers data for UK HEIs in order to illustrate the relative number/proportion of new graduates emanating from the UK HEI system which can be summarised in the table below:

Table 1: Summary derivation of new graduates, 2013/2014

	All subjects		Tech courses	
	n	%	n	%
All qualifiers	777,600	100%	28,400	100%
UK domicile	579,300	75%	19,600	69%
Undergraduate degree	353,700	45%	13,700	48%
Full-time	318,800	41%	12,500	44%
New graduates	269,700	35%	10,400	37%

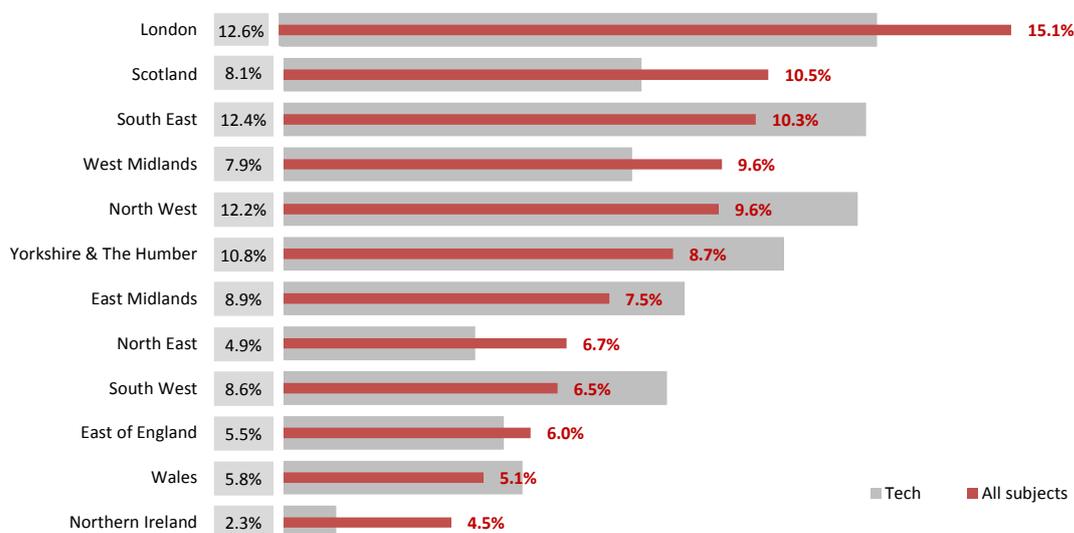
Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

In the following sections, the characteristics of new graduates are further explored, looking in particular at location of study, gender and the level of award obtained by this group of qualifiers.

7 New graduates by location of study

As with other disciplines, 'new graduates' (UK domiciled HE qualifiers from full-time undergraduate courses aged 24 or under) that were from tech courses were most likely to have studied in London and at 15.1%, the proportion of new tech graduates from the capital was 2.5 percentage points higher than would be expected given the overall distribution of qualifiers across the UK (i.e. with London accounting for 12.6% of new graduates as a whole).

Figure 4: New graduates by subject and region of provider, 2013/2014



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

8 Qualifiers by gender

The vast majority of new tech graduates in 2013/14 were male and in total, women accounted for just 16% of the total (compared with 44% of new graduates as a whole). The proportion was slightly higher amongst new graduates from telecoms (22%) as opposed to IT courses (16%) but female representation was still lower in each case than for any other subject area bar 'Engineering & Technology' (15%).

9 Qualifiers by level of attainment

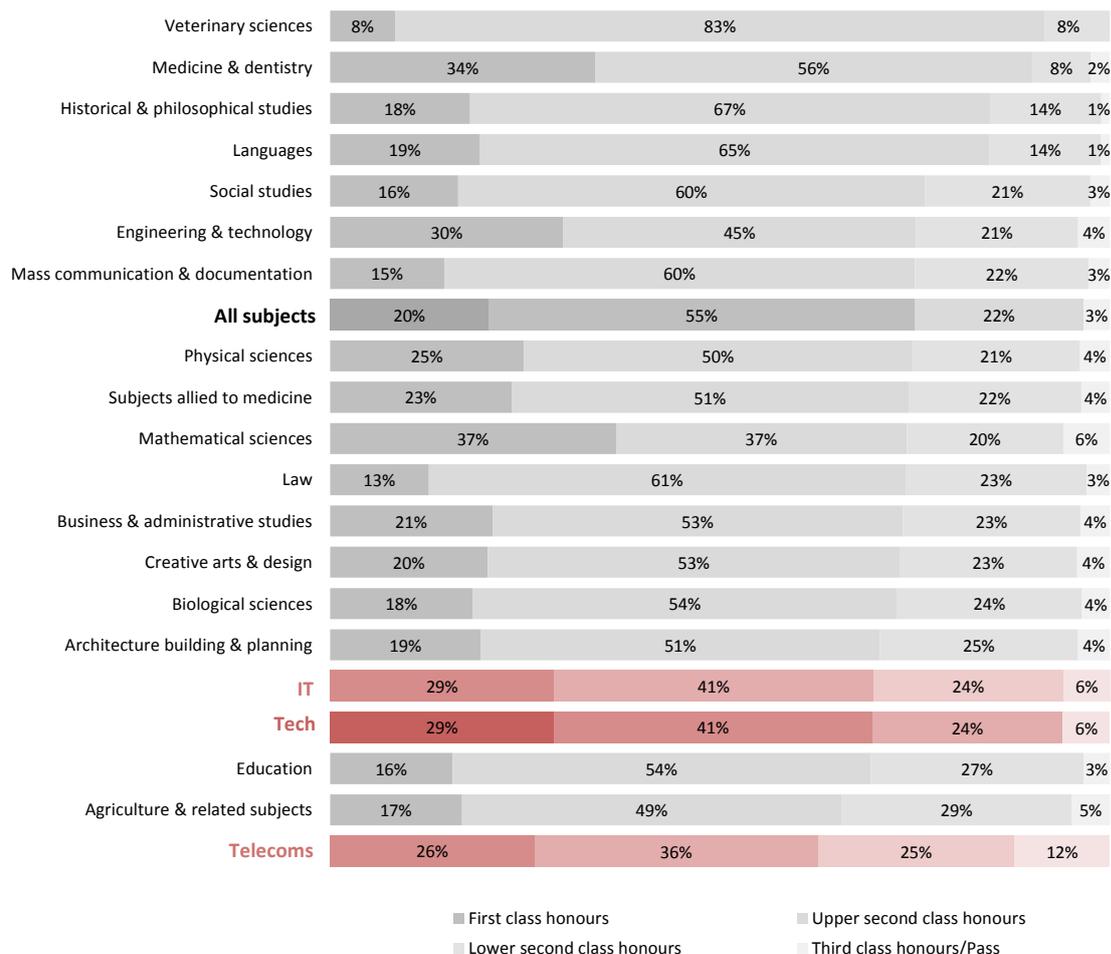
The level of attainment for new tech graduates in 2013/14 was well below that of other subject groups with just 70% of achieving a first or higher second class honours degree compared with 75% of all qualifiers. In fact, the proportion of new graduates from telecoms courses achieving this grade (63%) was lower than any other subject group.

This said however, at 29% the proportion of new tech graduates obtaining a first class degree was relatively high and the proportion of new IT graduates in particular that had gained this level of award (also 29%) was noted for being fourth highest after Mathematical Science,

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Medicine & Dentistry and Engineering & Technology (the proportion of new graduates in Telecoms gaining a first class degree at 26% was sixth highest).

Figure 5: Level of attainment achieved by new graduates by subject, 2013/2014



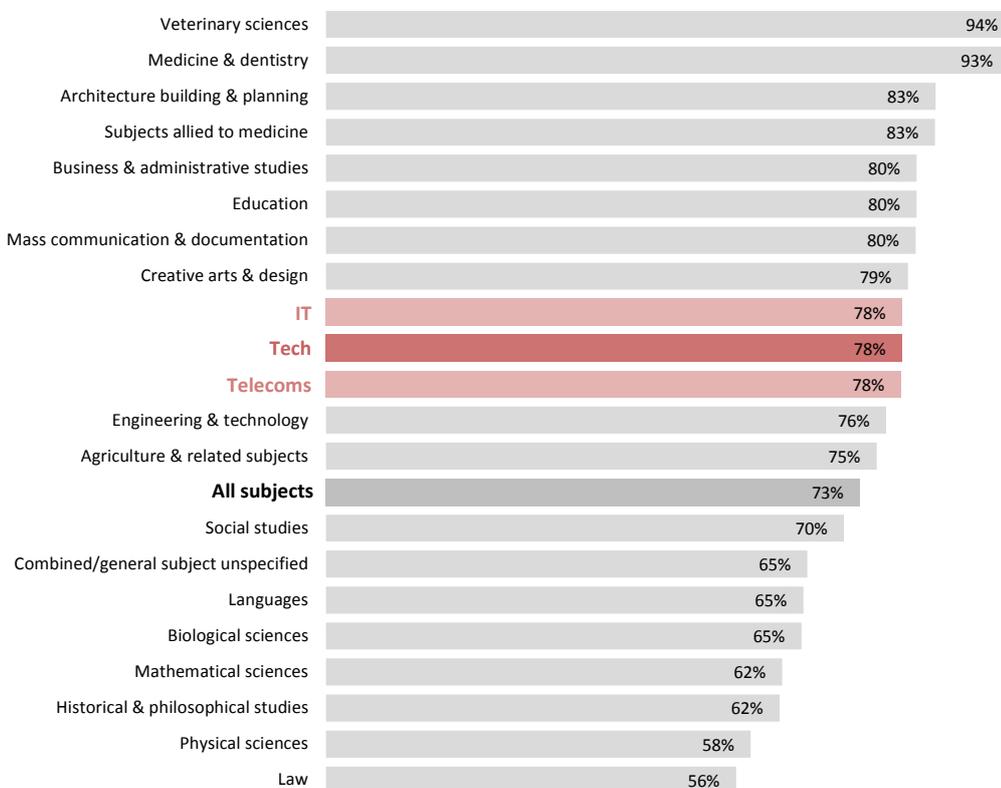
Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

10 Qualifiers in employment

At 78%, the proportion of new tech graduates in employment² 6 months after completing their HE studies was above the all subject average (73%) and this was also true of qualifiers from both IT and telecoms courses.

² In full/part-time work or 'primarily in work and also studying'

Figure 6: New graduates (primarily) in employment 6 months after graduation, 2013/2014



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

For new tech graduates at least there was a strong correlation between the level of award gained and the likelihood of being in work 6 months after completion – the proportion in work rising from 70% for those obtaining a third/pass, to 74% for a lower second, 79% for an upper second and 82% for those achieving a first class honours degree. Interestingly, by comparison, amongst new graduates as a whole the reverse was actually found to apply with the proportion in work falling from 75% of those with third class honours/a pass to just 68% of those with a first.

Compared with those graduating from other subject areas, new tech qualifiers that were in work were also more likely to be in full-time positions (comparison figures of 85% and 73% respectively) and this was again true for both IT and Telecoms qualifiers (85% and 83% respectively).

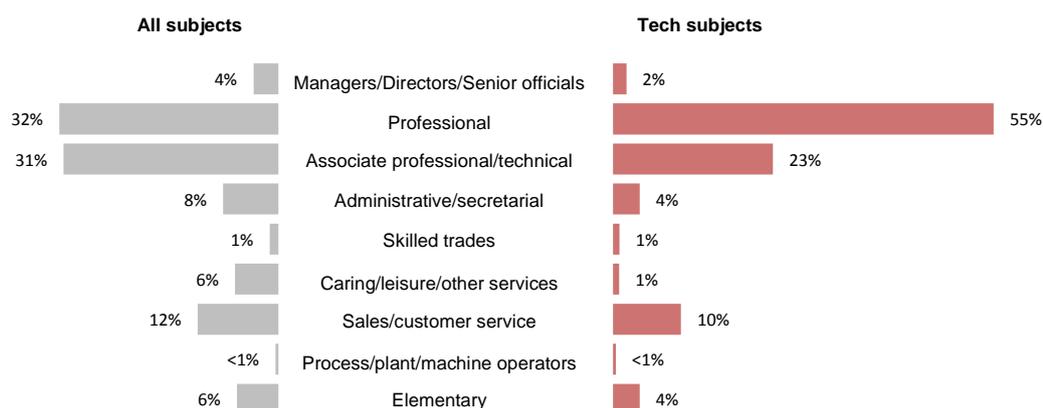
11 New graduates by occupation

Amongst new tech graduates in employment six months after leaving HE, eight in ten (80%) were working in positions at managerial/professional or associate professional level compared with two thirds (66%) of qualifiers (in employment) as a whole. A sizeable proportion (10%) of new tech qualifiers were working in sales/customer service level

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occupations, though this was also the case for new qualifiers more generally (i.e. 12% of all such qualifiers that were in employment 6 months after leaving).

Figure 7: New graduate employment by subject of study and broad level/nature of occupation



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

Looking at the specific nature of employment, it was found that 60% of new tech graduates had obtained work as tech specialists (compared with 4% of new graduates as a whole that were in work)– most often as programmers/software development professionals (29%), web designers/developers (8%) and IT user support specialists (6%). As would be expected, tech graduates were much more likely than other graduates to have found work in tech specialist roles and in total they accounted for 56% of tech positions held by graduate leavers six months after leaving HE

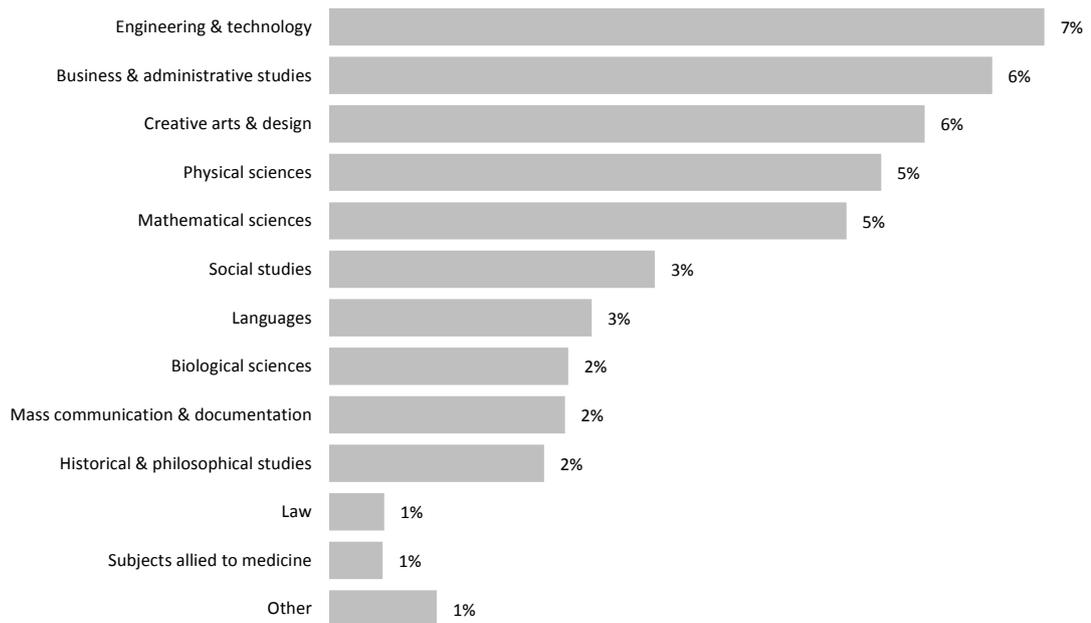
Table 2: New graduates taking up work as tech specialists by subject of study, 2013/14

	Tech courses	Other courses
All tech roles	56%	44%
Tech Directors	54%	46%
IT specialist managers	35%	65%
IT project & programme managers	41%	59%
IT business analysts, architects & systems designers	50%	50%
Programmers & software developers	68%	32%
Web designers/developers	49%	51%
Other Tech professionals	48%	52%
IT operations technicians	48%	52%
IT user support technicians	52%	48%
Tech Engineers	28%	72%
Other roles	2%	98%

Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

Aside from tech courses, there were no other subject areas associated with particularly large flows of new graduates into tech specialist positions and even engineering and technology graduates only accounted for 7% of all new graduates working in positions of this nature.

Figure 8: Proportion of new graduates working as tech specialists coming from non-tech courses, 2013/14



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

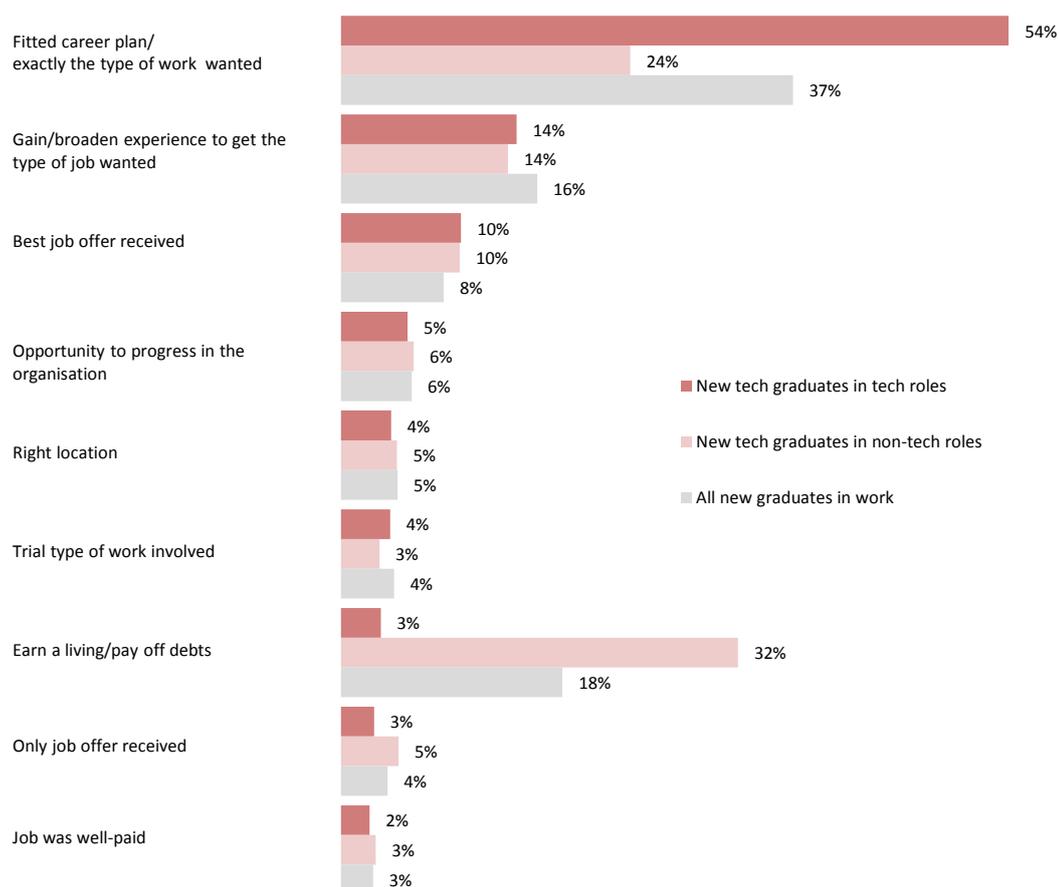
12 Reason behind graduate career choices

The primary reason why new tech graduates were working as tech specialists after leaving HE was that it fitted their career/was exactly the type of work they wanted – this reason cited by 54% of new tech graduates working in such roles. By contrast for those working in other occupations, money appeared to be the main driver for employment as just under one third (32%) stated that they had taken up work in order to ‘earn a living or pay off debts’.

The likelihood that new tech graduates had found their preferred job did however depend on the nature of tech employment secured and whilst 57% of tech graduates working in tech positions at managerial/professional level stated that the work fitted their career/was exactly the type of work they wanted, only 44% of those working as IT Technicians stated this to be the case.

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Figure 9: Reason for taking tech specialists/other roles by subject followed, 2013/14



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

13 New graduates by nation/region of employment

Overall on average just over six in ten (63%) new graduates from tech courses took up work in the region that they studied – this figure ranging from four in ten (44%) of those studying in the East Midlands to around nine in ten of those that studied in Scotland and Northern Ireland (88% and 95% respectively). Amongst the English regions, London and the North West retained by far the largest proportion of new tech graduates (78% and 71% respectively).

The likelihood that students would remain in their nation/region of study was much higher for those on tech courses than those studying other disciplines (comparison figure of 54% on average) and also for those gaining work as a tech specialist (55%) though in both cases the pattern was similar with highest retention observed within Scotland, Northern Ireland and London.

Table 3: Proportion of new graduates in work remaining in region of study, 2013/14

	New tech graduates	All new graduates	All new graduates in tech roles
North East	53%	45%	47%
North West	71%	61%	62%
Yorkshire and The Humber	54%	43%	45%
East Midlands	44%	33%	36%
West Midlands	56%	48%	42%
East of England	53%	44%	49%
London	78%	69%	73%
South East	54%	44%	48%
South West	51%	43%	42%
Wales	54%	50%	47%
Scotland	88%	82%	78%
Northern Ireland	95%	90%	95%
Average	63%	54%	55%

Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

14 New graduates by industry of work

Just under one half (48%) of new graduates working in tech roles in 2013/14 were found to be working in tech companies – the same proportion as for tech specialists as a whole working in tech companies in the UK at that time (48% during 2014)³. The proportion on new graduates from tech courses working in tech positions in tech firms was notably higher than for other courses (52% versus 43%) and in total tech businesses provided work for 37% of all those that had studied in this field.

Table 4: New graduates working in the tech industry by role and subject of study, 2013/14

	Tech courses			Other courses			All courses		
	Tech roles	Other roles	Total	Tech roles	Other roles	Total	Tech roles	Other roles	Total
Tech services	49%	9%	33%	39%	2%	2%	44%	2%	4%
Tech manufacturing	2%	1%	1%	1%	-	-	1%	-	-
Tech sales/distribution	2%	2%	2%	3%	1%	1%	2%	1%	1%
Tech industry total	52%	12%	37%	43%	2%	3%	48%	3%	5%
Other industries	48%	88%	63%	57%	98%	97%	52%	97%	95%

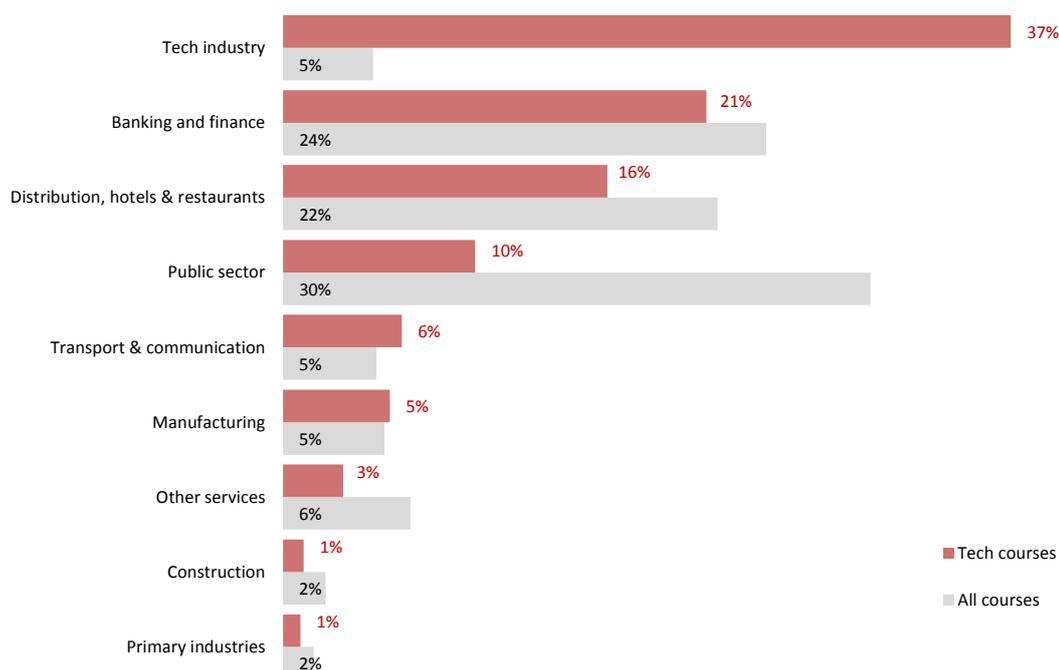
Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

³ ONS Labour Force Survey, 2014 - four quarter average

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Aside from tech businesses the next most important employment sectors for new tech graduates (and new graduates more generally) were banking & finance (21%), distribution/hotels/ restaurants (16%) and the public sector (10%). This said, the distribution of employment by industry differed significantly, with those from tech courses notably less likely than others to be working in public sector firms in particular as illustrated in the chart below.

Figure 10: New graduates in employment by industry of work and subject of study, 2013/14



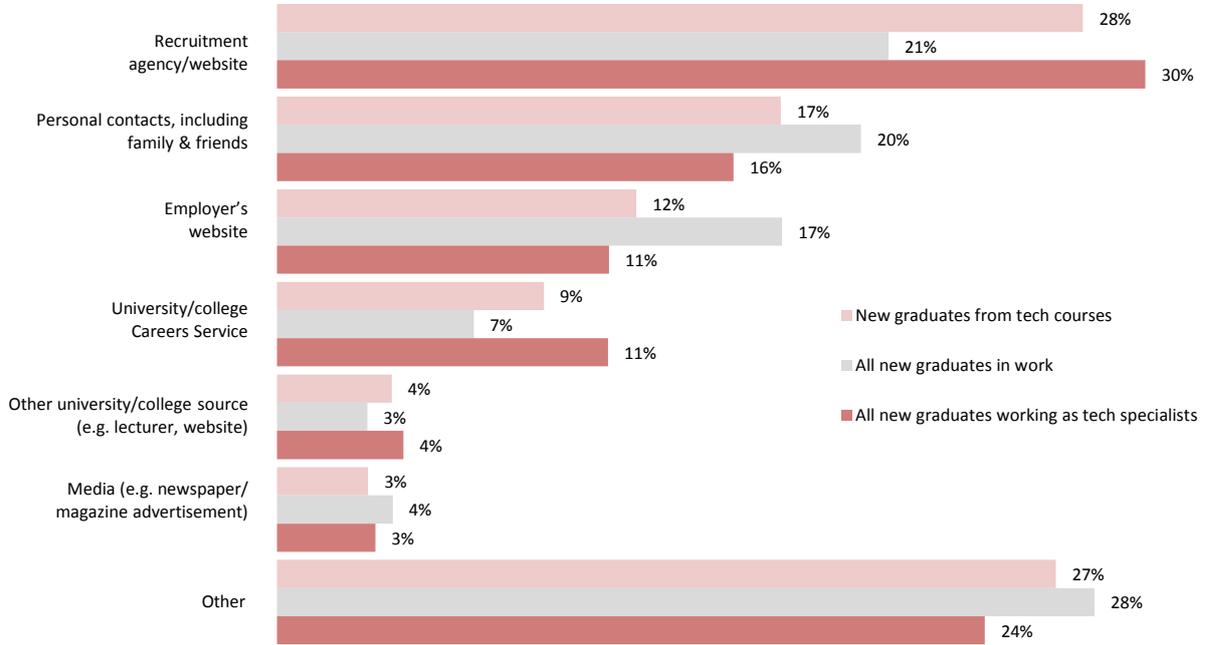
Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

Considering the findings from an employer perspective, one third (33%) of all new graduates taking up work in tech businesses were from tech degree courses and after tech graduates, business & administrative studies (business studies in particular) was the next most likely source of new graduate talent (17% of the total).

15 Means of finding work

The most common means of finding work for new tech (and other) graduates in 2013/14 was via recruitment agencies/web sites and almost one in three (28%) of new tech graduates were found to have obtained employment in this manner.

Figure 11: Means of obtaining employment amongst new graduates in work, 2013/2014

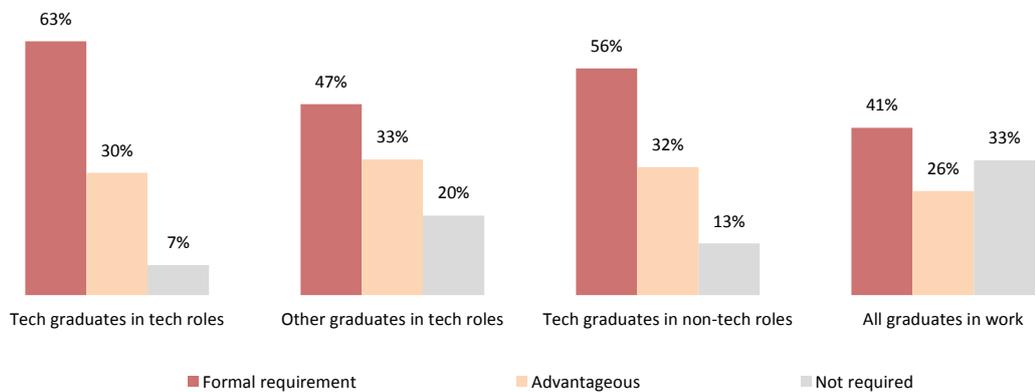


Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

16 Importance of studies for obtaining work

More than six in ten (63%) new tech graduates working in tech positions post study stated that they thought their qualification was a formal requirement for the job they were in. This was a higher proportion than either those working in non-tech roles or working graduates more generally (47% and 41% respectively).

Figure 12: Importance of HE qualification for obtaining work,

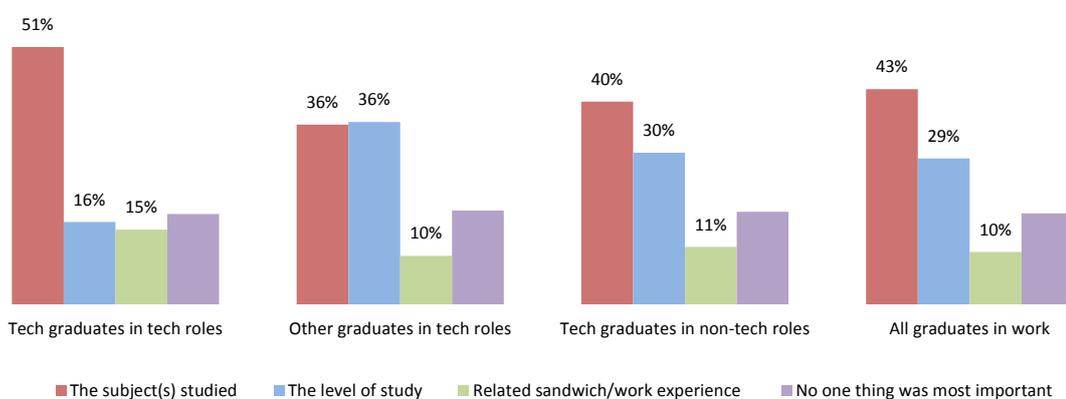


Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

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Asked what was of most importance to their employer, the most commonly held view was that it was the subjects studied – an opinion held by 51% of new tech graduates working in tech roles (though only 36% of those working non-tech positions). The proportion considering that the subject studied was of most importance to their employer tended to be slightly higher amongst tech graduates working in tech positions at managerial/professional level.

Figure 13: Importance of degree elements to employer

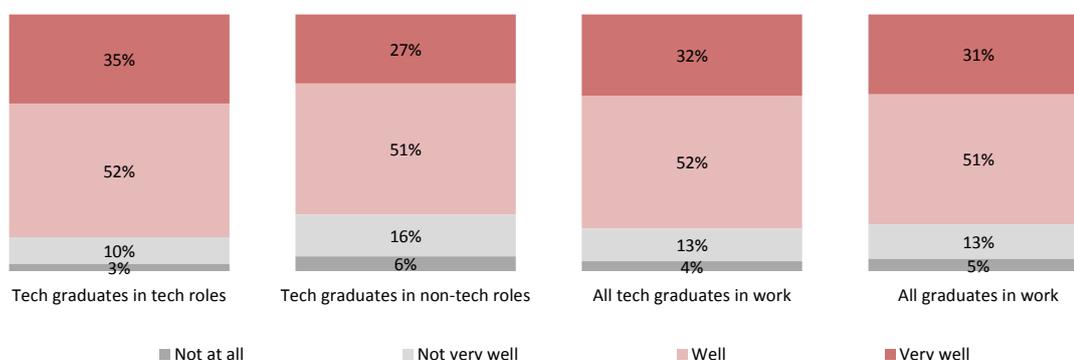


Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

17 Usefulness of studies in the work environment

Around nine out of ten (87%) new tech graduates working in tech positions stated that their HE study had prepared them well or very well for work – a slightly higher proportion than for working graduates as a whole.

Figure 14: Importance of degree elements for obtaining work



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

18 New tech graduates and further study

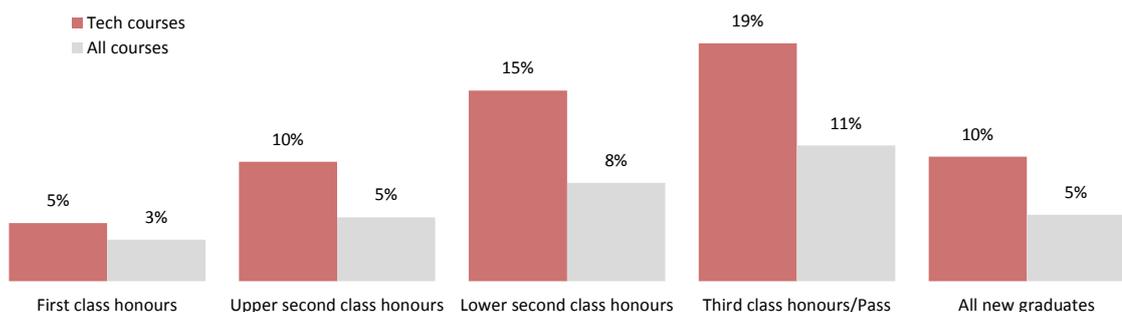
Whilst the proportion of new tech graduates moving into employment post completion was higher than the average for new HE graduates as a whole, the likelihood that new tech qualifiers would go on to pursue further studies was much lower. In fact at just 8% of new qualifiers, the incidence of further study amongst new tech graduates was half the overall level recorded in 2013/14 (16%).

The likelihood that new tech graduates would continue their studies was slightly higher amongst those achieving a first class degree (10%) though this compares with a figure of 24% amongst new graduates as a whole. Similarly, the proportion of tech graduates achieving an upper/lower second and continuing with their studies was also much lower than average (7% versus 15%) and it is only amongst those achieving a third/pass that the levels appear similar (7% and 5% respectively in this case).

19 New tech graduates out of work

At 10% of all new graduates, the unemployment rate amongst qualifiers from tech (undergraduate) degree courses in 2013/14 was higher than for any other discipline and twice the level recorded amongst new graduates as a whole. As with other courses, the likelihood that new graduates were unemployed 6 months after leaving HE was seen to increase significantly amongst 'lower performing' graduates as illustrated in the chart below.

Figure 15: Unemployment rate by level of attainment and subject, 2013/14



Source: Analysis of data supplied by HESA undertaken by The Tech Partnership

Aside from the grade obtained, the core subject studied also appeared to impact strongly on the incidence of unemployment amongst new tech graduates and in particular with an 'unemployment rate' of 16% those taking games related courses were notably more likely than other tech graduates to be out of work six months after leaving HE.

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Notes on data presentation

1. All figures presented in this datasheet have been rounded to the nearest 100 unless otherwise stated.
2. Domicile – all figures presented are for UK domiciled students unless otherwise stated.
3. The terms undergraduate/first degree have use been used interchangeably throughout the report.
4. New graduates – references UK domiciled HE qualifiers from full-time undergraduate degree courses aged 24 or under.
5. The terms businesses/firms/companies have been used interchangeably throughout the report.
6. The terms tech courses/tech discipline/tech subjects have been used interchangeably throughout the report.
7. The terms graduates/qualifiers have use been used interchangeably throughout the report and refer to UK domiciled HE qualifiers from full-time undergraduate degree courses.
8. 'Tech courses' is the collective term given to HE courses in; IT (JACS subject code 3 – 'Computer Science') and Telecoms (JACS 3 codes H640 - Communications engineering, H641 - Telecommunications engineering and H643 - Satellite engineering).
9. UK domicile in this publication is deemed to include individuals domiciled in the Isle of Man and the Channel Islands.
10. 'Tech specialists' is the collective term given to occupations listed under the following ONS Standard Occupational Classification (SOC2010) codes:

Directors

1136 - Information Technology and Telecommunications Directors

'Professionals'

2133 - IT Specialist Managers

2134 - IT Project & Programme Managers

2135 - IT Business Analysts, Architects and Systems Designers

2136 - Programmers & Software Development professionals

2137 - Web Design & Development professionals

2139 - Information Technology & Telecommunications professionals n.e.c.

Technicians

3131 - IT Operations Technicians

3132 - IT User Support Technicians

Engineers

5242 - Telecommunications Engineers

5245 - IT Engineers.

11. 'Tech industries'/businesses/firms is the collective term given to industries listed under the following ONS Standard Industrial Classification (SIC2007) codes:

Tech manufacturing

26.2 - Manufacture of computers & peripheral equipment

26.3 - Manufacture of communication equipment

27.31 - Manufacture of fibre optic cables

Tech sales/distribution

46.5 - Wholesale of information and communication equipment

47.4 - Retail sale of information and communication equipment in specialised stores

58.2 - Software publishing

Tech services

- 61.1 - Wired telecommunications activities
- 61.2 - Wireless telecommunications activities
- 61.3 - Satellite telecommunications activities
- 61.9 - Other telecommunications activities
- 62.0 - Computer programming, consultancy and related activities
- 63.1 - Data processing, hosting and related activities; web portals
- 95.1 - Repair of computers and communication equipment

Code 18.20/3 (Reproduction of computer media) would normally be incorporated within this definition however HESA data was not available for this particular industry at the time of going to press. Given the number of firms /levels of employment associated with this code, it is not considered likely that the inclusion/omission of related data would have any significant impact upon the data presented.

12. 'Primary industries' includes all sectors classed as either Agriculture/forestry/fishing or energy/water.

For further information please contact:

The Tech Partnership | 1 Castle Lane | London | SW1E 6DR
+44 207 963 8920 | info@thetechpartnership.com

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