



Women in IT - DRAFT

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Definition

Women choose IT as a profession less often than men, and less often than other under represented groups. BCS would like to see this change, as there are many good opportunities and women flourish in IT environments.

Background / Context:

Today's job market is very competitive. For some companies, it doesn't feel much like 'post recession', and growth is evasive. Some are growing again and vacancies are opening up as recruitment freezes are lifted. The public sector remains challenging. IT is both the enabler of savings and the engine of growth, and people with skills and experience in IT are likely to be more in demand than people with other skill sets. IT jobs are often well paid, with opportunities for travel. IT is integral to every business process, and IT teams interact with business teams, working together in exciting and dynamic environments to transform their companies. At a careers convention one woman computer scientist said: 'The work is varied, stimulating, flexible and, compared to other industries, well paid. It's a great place to be.'

However, it seems that for many women IT isn't regarded as a great place to be.

Key issues:

BCS, e-skills UK and Intellect, in association with BERR, have produced the 'Women in IT Scorecard'

<http://www.bcs.org/content/conWebDoc/52816> which shows:

- By 2013, of the 1,129,000 people working as IT specialists in the UK, less than one in six were women.
- STEM subjects - science, technology, engineering and mathematics - see better representation for females with 34 per cent of applicants and 35 per cent of acceptances (UK domicile), but again for the computer sciences there is a huge drop to 12 percent applicants and 13 per cent acceptances.
- Whilst across all subjects in 2012 females accounted for 59 per cent of UK domiciled qualifiers they accounted for just 18 per cent of qualifiers from all computer science/IT related HE courses. Females who sat an IT related GCSE in 2013 decreased three percentage points compared to 2012, and in 2013 females accounted for just 6.5 per cent of those taking computing A-Level, a decline of 1.5 percentage points compared to 2012
- When girls do take part in computing subjects at GCSE and A-Level they outperform their male counterparts. The research shows that 76.3 per cent of females (compared to 69.2 per cent of males) who took an IT related full course GCSE were awarded A*- C grades.
- Within the IT sector itself only 11 per cent of IT specialists are women and the median gross weekly rate of pay for female IT specialists was 16 per cent less (£640) than the comparison figure for men working in IT roles (£760). The recorded level of pay for women IT roles has been consistently below that of male IT specialists in each of the past 10 years.

The UKRC has published the following ([UKRC statistics, women and men in science, engineering and technology: The UK statistics guide 2010](#)).

- Men are 6 times more likely to work in SET than women
- There has been a 2% increase in the number of women working in all SET occupations since 2003 – to 12.3% (compared with 40% in Manufacturing)
- The pay gap is 22% through a combination of high flying males commanding large salaries and few women at this level; and a true gap (11%) in salaries. There were no reductions in the pay gap in science and technology between 2003 and 2008.
- In the FTSE 100 in SET jobs there were 10% women in 2009
- There is a gradual improvement. More girls are studying SET subjects at school and at A level, and very gradually more girls are opting for SET subjects at university and going into SET careers. But progress is extremely slow.
- Many women do not use their degree – 70% in 2008.

In business generally, across all professions, women have limited presence on boards, despite evidence that companies with a strong female representation at Board and top management level perform better than those without and that gender diverse boards have a positive impact on performance ([Lord Davies Report, February 2011](#) and previous [McKinsey report](#)). Whilst the Davies report, and challenge to the FTSE 100, has



seen every board now have a woman present, it is still clear that many of the board positions occupied by women in the top one hundred and in the FTSE 250 are non-executive positions.

In Scotland, The Royal Society of Edinburgh has also published some interesting statistics in its report (April 2012): Tapping all our Talents - Women in science technology, engineering and mathematics: A strategy for Scotland

- Although universities now graduate large numbers of women in science, technology, engineering and mathematics (STEM), 73% of women graduates are lost from STEM compared with 48% of male graduates, with a corresponding loss of researchers
- It is estimated that a doubling of women's high-level skill contribution to the economy would be worth as much as £170million per annum to Scotland's national income.

So what's happening? In school and at university, computing and computer science overall is less popular than it used to be. Fewer people are taking GCSE and A level computing courses, or applying to computer science or IT courses at university. But the number of people in IT occupations continues to rise. The 2010 UKRC factsheet "[Women in computing in the UK: a major shortage](#)" provides a useful breakdown of statistics across levels of education and in the workforce.

Many employers look beyond the disciplines of computer science to recruit into IT roles – science, maths and economics or business qualifications are considered. Whilst these provide excellent transferable analytical skills which can be valuable and necessary to the profession, this is not ideal for technical IT roles.

Skills such as communications, team work, data collection and analysis, customer service, responsiveness and presentation skills are increasingly in demand and women often excel in these skills. The opportunities for women to enter employment in the IT sector are very good and the diversity and perspective that women add to teams is valuable.

Many universities are also doing important work in the area of recruiting women to computing degrees and supporting them through their course to ensure retention to join the IT profession. The [Athena Swan Charter for Women in Science](#) recognises and celebrates good employment practices for women working in SET higher education and research and membership is assuming increasing importance as a pre-requisite for other activities.

Furthermore, given that IT-related jobs are to be found within almost every organisation, they allow great flexibility of career choice, including in the most innovative and successful companies. The best employers recognise the importance of retaining their female staff and encourage women to combine families and work, taking into account the need to work locally rather than travel. With many IT jobs being shift or project based, employers are able to offer many different flexible styles of working. The investment in training staff means that employers are keen to encourage women to keep in touch and return after a career break.

BCS position on the key issues:

BCS has had a long tradition of working to increase the participation of women in IT. The Institute works to increase the number of women in the IT profession and in IT jobs, including more women studying computer science. We are now taking a leadership role to have 'IT recognised as an exemplarily inclusive profession, for both IT and non IT professionals in the computing domain' and we are starting with women. In support of this key objective, the Institute aspires to reach a target of 40% women on all Boards, and aims to have between 20 and 40% women by 2016. Additionally we ran a programme in 2012 to put Board and Committee members through unconscious bias training. During 2014 the Institute has rolled out another phase Unconscious Bias training across the country. It is planned that completion of this training will be a pre-requisite to being a Board or Committee member from 2014. The Institute set out to be an exemplar and has been awarded funding from the Royal Academy of Engineering to support this second phase of training. Training materials produced by the Institute will be made available to 29 other Professional Engineering Institutes, along with support for delivering them. This will promote best practice and implement initiatives that we hope will increase the number of women at all levels.

- We need lots of computer scientists who have got computer science degrees and we want more of those to be women. There have been a number of breakthroughs in this area with the recognition that the ICT and computing curricula in schools are woefully inadequate and old fashioned, putting both girls and boys off careers in IT. For example Michael Gove has called for more computing science in the school curriculum, (following on from the criticism by Eric Schmidt of the UK for not producing more computer scientists). The [BCS Academy of Computing](#) has been taking the lead in much of these discussions and contributed fully to the [Royal Society report](#) published January 2012. Through the BCS Academy of Computing and [Computing at School](#) (CAS) the Institute is working to encourage schools to teach computing and to engage with all pupils.
- Other initiatives include:



- [BCSWomen](#) sponsors the Lovelace Colloquium and its aim is to encourage graduates and undergraduates to consider careers in IT. It is held in different locations around the country. To-date there have been eight Lovelace events, the most recent attracting 150 attendees and many posters submitted by women in ICT degrees.
- BCSWomen has an aim to bring more women to board positions within BCS through Specialist Group and Branch leadership.
- They ran a competition in 2013 to create posters for schools careers offices containing women in IT role models on and these have been made available to schools and are running the competition again this year.
- The Institute is collaborating in [Technocamps](#), an initiative from the Welsh universities to inspire and encourage school children to go into the STEM subjects. It also supports, along with a number of key employers, an initiative to raise the profile of the IT industry in schools, talking about the tremendous range of opportunities IT offers.
- BCS, together with IBM, sponsors the [Karen Spärck Jones lecture series](#) which builds on the activities to celebrate, inform and support women engaged in computing research. Professor Spärck Jones was a pioneer of the statistical approach to studying language which underlies many developments on the internet.
- BCS, together with IBM, sponsors the [London Hopper Colloquium](#), an annual workshop which provides networking, career development talks and a poster competition for women in computing research, especially PhD and PostDoc students.
- In 2015 BCSWomen will run an Android Appathon as part of a Guinness World Records Challenge to see the largest number of participants learn to code an Android App. Subtly, this is a way of getting more women technologists in front of the public.

The Institute will continue to focus on this area and collaborate with other partner organisations to raise the participation of women in the profession.

We are building a profession that is good for women and better for all.

[Download the position](#)

[Women in IT: Further Information](#)

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