CYBER SECURITY SKILLS GAPS AND SHORTAGES IN THE UK CYBER SECTOR IN 2021
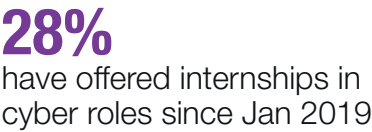
SKILLS GAPS

Skills gaps exist when the individuals working in or applying for cyber roles **lack particular skills.**
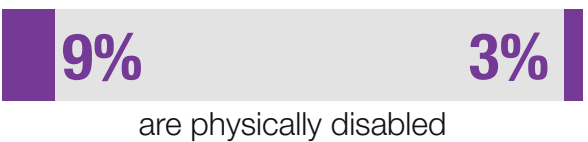
18% -14
have **existing employees** in cyber roles who lack necessary technical skills

40% -19
have had **job applicants** lacking necessary technical skills

23%
have **existing employees** in cyber roles who lack communication, leadership or management skills

18% -11
have had **job applicants** lacking communication, leadership or management skills

▶ These cyber sector businesses have technical skills gaps in the following:[1]

incident management, investigation or digital forensics
41%

assurance, audits, compliance or testing
37%

cyber security research
36%

threat assessment or information risk management
32%

cyber security governance and management
31%

implementing secure systems
22% -20

operational security management
21%

business resilience
19%

RECRUITMENT

28%
have offered internships in cyber roles since Jan 2019

47%
have had vacancies in cyber roles since Jan 2019

Among these 47%, the most common recruitment approaches are:

48% recruitment agencies

35% social media posts or ads

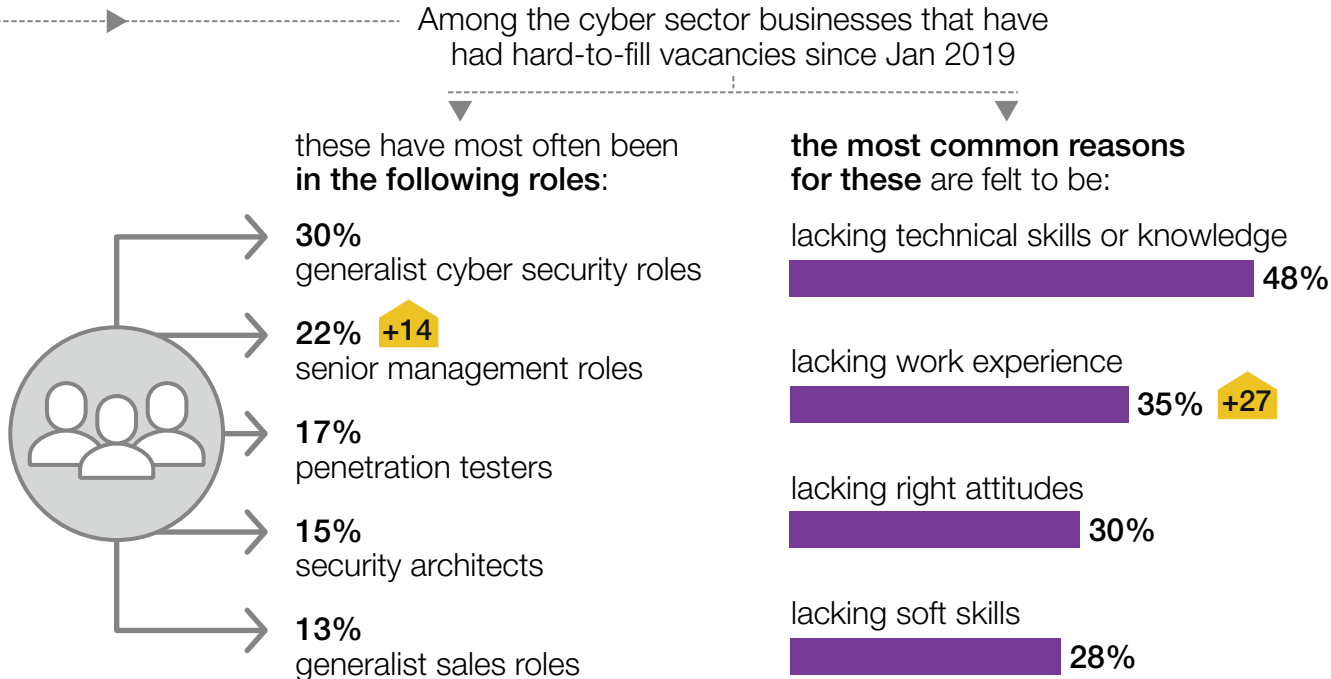**33%** word-of-mouth or industry networks
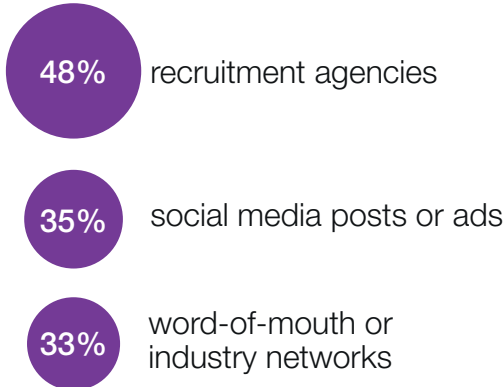
DIVERSITY IN THE CYBER SECTOR

Across **all** cyber roles:

Across **senior** cyber Roles (typically 6+ Years' experience):

17% **15%**
are from ethnic minority backgrounds

16% **16%**
are women

10% **8%**
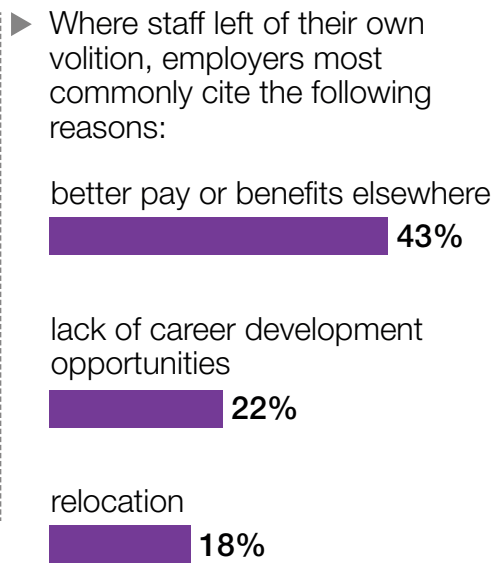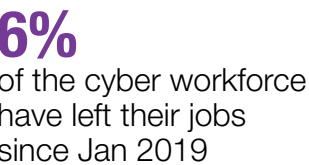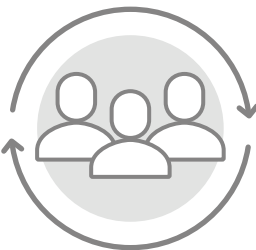are neurodivergent[2]

9% **3%**
are physically disabled

SKILLS SHORTAGES

Skills shortages exist when there is a **shortfall in the number of skilled individuals** working in or applying for cyber roles.

37%
of all vacancies for cyber roles since Jan 2019 have been hard-to-fill

Among the cyber sector businesses that have had hard-to-fill vacancies since Jan 2019

these have most often been **in the following roles:**

30%
generalist cyber security roles

22% +14
senior management roles

17%
penetration testers

15%
security architects

13%
generalist sales roles

the most common reasons for these are felt to be:

lacking technical skills or knowledge
48%

lacking work experience
35% +27

lacking right attitudes
30%

lacking soft skills
28%

STAFF TURNOVER

6%
of the cyber workforce have left their jobs since Jan 2019

4%
left of their own volition

▶ Where staff left of their own volition, employers most commonly cite the following reasons:

better pay or benefits elsewhere
43%

lack of career development opportunities
22%

relocation
18%

CYBER SECURITY SKILLS GAPS AND SHORTAGES IN THE UK CYBER SECTOR IN 2021

ABOUT THIS INFOGRAPHIC

The findings in this infographic come mainly from the Understanding the Cyber Security Skills Labour Market 2021 study. This is a mixed-method study that Ipsos MORI has carried out on behalf of the Department for Digital, Culture, Media and Sport (DCMS). The study includes a representative telephone survey of 171 UK businesses in the cyber sector, carried out from 6 August to 30 October 2020.

The rest of the study involves:

- a separate quantitative survey of UK businesses, charities and public sector bodies

- quantitative analysis of cyber security job vacancies

- qualitative research with large businesses, cyber sector firms and recruitment agents.

A full findings report and technical report have been published on the GOV.UK website. Trend data are taken from a comparable cyber security skills labour market survey for DCMS carried out in 2019 (published in 2020). We only display trends where there are statistically significant differences (i.e. in all other cases, responses have not observably changed across years, or we are asking a question for the first time this year). The 2021 study is available at: https://www.gov.uk/government/publications/cyber-security-skills-in-the-uk-labour-market-2021.

The survey data for the "Skills gaps" section come from a separate survey of cyber sector firms that Ipsos MORI carried out for DCMS earlier in the same year, as part of the Cyber Security Sectoral Analysis 2021. This was also a representative survey of 262 UK businesses in the cyber sector, carried out from 12 May to 20 July 2020. These businesses could have taken part in both surveys.

[1] The technical skills areas in the "Skills gaps" section have longer definitions in the survey, based on the descriptions from the CIISec Skills Framework.

[2] The concept of neurodiversity covered in the "Diversity in the cyber sector" section was defined for survey respondents as including conditions or learning disorders include autism, Asperger syndrome, dyslexia, dyspraxia and attention deficit hyperactivity disorder (ADHD).