Examining the digital skills challenges engineering firms are facing

The Institution of Engineering and Technology (IET) carries out an annual skills survey of engineering employers in the UK. Our latest report* highlights the need to look further into digital skills. We asked employers about the skills challenges they are currently facing, how they are addressing these challenges, and what they need to do to adapt for the future.

This flyer presents the key facts and themes from the survey.

Advanced digital technology – current state of affairs

47% of employers have staff that regularly use robotic/automated equipment
45% of employers have staff that regularly use software/equipment that uses AI/machine learning
32% of employers have staff that regularly use virtual/mixed reality

Skills gaps

54% of employers report a technical skills gap in the external labour market
42% of these employers specify a specialist digital or IT skills gap
47% of employers report a technical skills gap within their current workforce

Addressing technical skills shortages

46% of employers report a skills gap cite the technical level
48% of employers prefer to train current employees rather than recruit more technicians (29%) to address this gap
63% of employers are more likely to think on-the-job training is effective for addressing skills shortages than formal qualifications (35%) or e-learning (21%)
44% of employers give their employees digital skills training
45% of these employers specify a specialist digital or IT skills gap
48% of those reporting a skills gap cite the professional level (HND+)
46% of those reporting a skills gap cite the technician level
47% of those reporting a skills gap cite the operative level

Economic consequences

Among those employers reporting a digital skills gap in their current workforce

49% say it harms productivity
35% say it restricts growth
35% say it harms innovation
29% say it reduces ability to deliver contracts

48% of those reporting a skills gap cite the professional level (HND+)
46% of those reporting a skills gap cite the technician level
47% of those reporting a skills gap cite the operative level

59% of employers think skills training is best done 'in-house' or by professional training bodies (53%) than in universities (29%)

58% of large companies are more than twice as likely as SMEs (27%) to give their employees digital skills training

63% of employers are more likely to think on-the-job training is effective for addressing skills shortages than formal qualifications (35%) or e-learning (21%)

44% of employers give their employees digital skills training

45% of these employers specify a specialist digital or IT skills gap
48% of those reporting a skills gap cite the professional level (HND+)
46% of those reporting a skills gap cite the technician level
47% of those reporting a skills gap cite the operative level

Read our full survey at theiet.org/skills
IET Skills for a Digital Future
Survey

Industry trends

AI skills will be increasingly important
36% of employers think its important their engineers understand AI by 2027, compared to 24% who think its important now

31% of employers say AI/machine learning skills will be important to sector growth in the next five years

Among those that expect AI to be important for them, say they don’t have the necessary skills
50% reporting an AI skills gap say the shortage is at degree/professional level

32% reporting an AI skills gap say the shortage is at the technician level

46% say that senior management at their company does not understand AI

43% cloud computing
39% machine learning
37% data security/privacy

Most employers think that senior management doesn’t understand other emerging technologies such as
51% extended reality
55% the metaverse
54% quantum engineering/computing

Digital strategy

51% of employers have a digital skills strategy

92% of those with a digital skills strategy need additional skills to deliver the strategy – across innovation, agile-thinking, and management skills

Despite this skills gap
47% of those with a digital skills strategy plan to deliver the strategy within the next two years

Government action

78% of employers support at least one government action that could help them meet their digital skills needs

58% of employers approve government support for reskilling existing employees:

40% support grants/loans for training programmes/reskilling

39% support more support to train/reskill in priority areas

33% support careers advice in schools/colleges

25% support easier visas to bring-in skilled workers

For further information and to read our full survey, visit theiet.org/skills

@TheIET
theiet.org