

White Paper

The Fujitsu Energy, Utility and Built Environment Skills Survey 2016

Supplying Future Demand



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How serious is the skills crisis in the energy, utility and built environment (EUBE) sectors?

The skills crisis has to rank as one of the most important challenges facing EUBE sectors today. Recent research by the UK Commission for Employment and Skills shows that over a third of vacancies in electricity, gas, water and construction are due to skills shortages. In the engineering sector, the Institution of Engineering and Technology (IET) states UK businesses need 87,000 new engineers each year.

Everywhere you look, businesses are struggling to find, engage and retain the employees they need. Thanks, in part, to young people viewing EUBE sectors as outdated, the result is a much-publicised war for talent – with sectors competing for the same shrinking pools of recruits.

The rise of digital technology has made the search for talent even more difficult. Today, businesses in EUBE sectors need employees skilled in STEM (science, technology, engineering and mathematics) subjects more than ever, including those with advanced security and data analytics skills. But today, all businesses are digital to some extent, and the competition for skilled IT workers is the fiercest of all.

What makes businesses in EUBE sectors unique, is the critical nature of their operations to the UK. Unlike most sectors, the inability to adequately staff these companies affects national resilience. The skills gap here not only threatens business growth; it threatens our energy and water supply and our national infrastructure. Solving the skills gap crisis in these sectors should therefore be a national priority.

Fujitsu recognises that the development of the next generation workforce is vital. So to help these businesses get to grips with the skills gap crisis,

we commissioned research comparing the perceptions of employers with those who will comprise the next generation of workers. 250 directors, senior managers and business owners were interviewed for the research, along with 1,004 young people currently deciding which GCSEs to take: a major crossroads in the journey towards a career.

The Fujitsu Energy, Utility and Built Environment Sectors Survey 2016 paints a picture of an industry that is at times out of touch with the next generation of workers, and a future workforce that needs to be engaged much more effectively. This report draws together the insight gained from our previous white papers (A Student Perspective & An Industry Perspective). It highlights the realities these sectors now face and examines them to provide relevant, actionable advice.

There are clear lessons to draw from the report about what needs to be done to win the hearts and minds of future employees, and ensure businesses in the EUBE sectors can continue to operate effectively in the years ahead.

I hope you enjoy the report and find information in here that can help you address the skills gap in your organisation.



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The challenges of an evolving workplace



Employment needs are changing at a faster pace than ever before, driven by emerging technologies and new trends. How businesses address the emerging challenges will affect their future success.

Finding and retaining skilled talent remains problematic

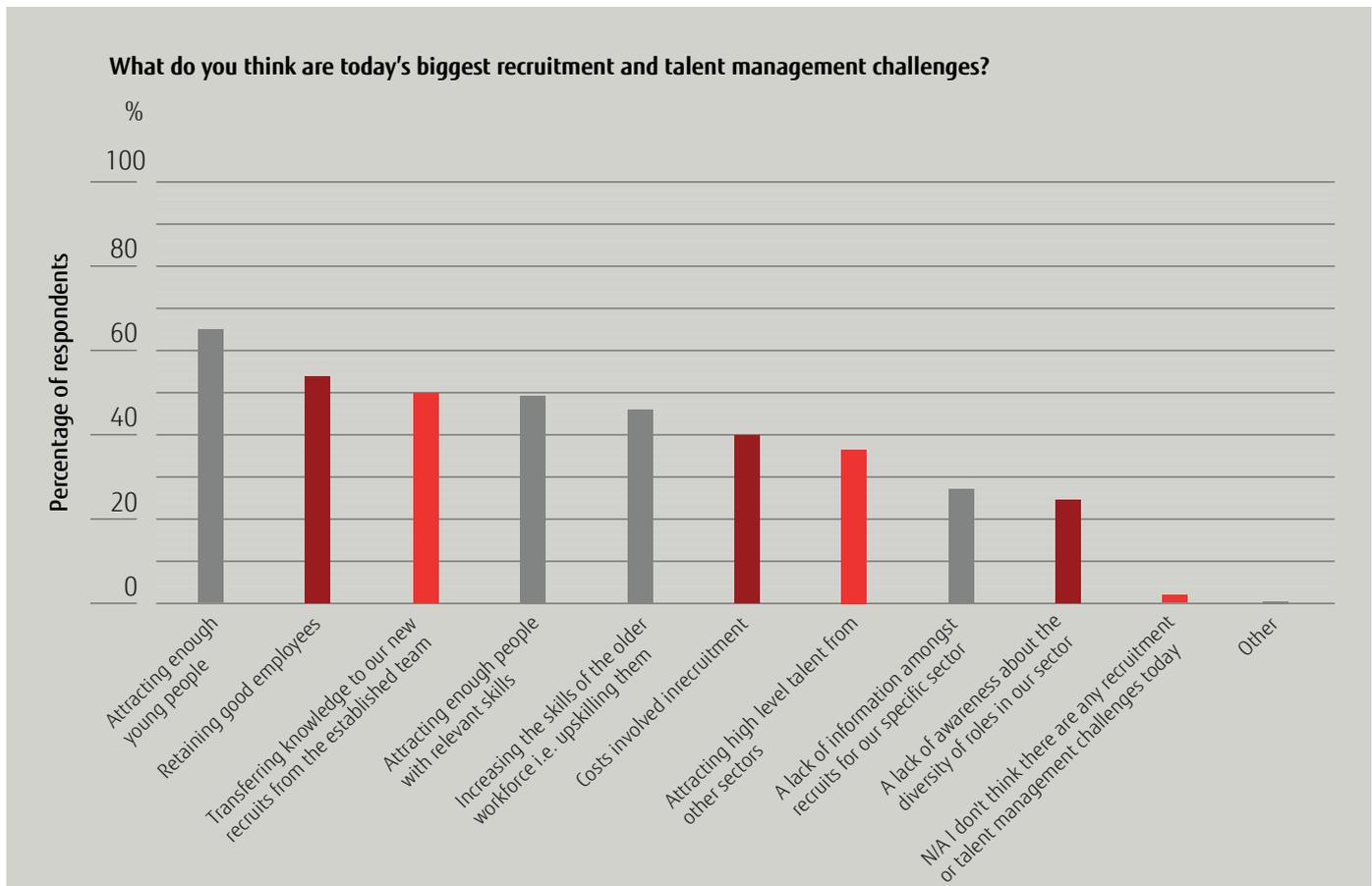
The workplace of today is almost unrecognisable to that of twenty years ago. The demographic trend has completely transformed: Baby Boomers (born 1946 - 1964) are retiring, Gen X (born 1960s - mid 1970s) have taken their place in top leadership positions and Gen Y (born 1980s - 2000s) has entered the workforce.

This shift is leading to a range of challenges, from meeting the vastly different expectations of Gen Y workers, to managing the loss of knowledge caused by retirement. In 2015 there were 9.4 million people in employment over the age of 50 in the UK, equivalent to over 30% of the workforce. When they retire, businesses need to ensure that their knowledge and experience does not leave with them.

Technology could help ensure this by facilitating 'soft retirement'. This would give experienced seniors the opportunity to train new recruits in the field from home, using video links for real-time monitoring.

But digital technologies bring their own challenges. Businesses in the EUBE sectors must embrace digital technologies in order to benefit from the operational efficiencies such technologies bring and create the digital business models demanded by customers and regulators. The workforce must therefore increasingly be skilled in the use of digital tools, in addition to the core competencies 'already' required by businesses in these sectors.

These trends are reflected in The Fujitsu Energy, Utility and Built Environment Survey 2016. While employers have a need for highly-skilled recruits, the study reveals that many are finding it difficult to find suitably skilled candidates, particularly when it comes to accessing available IT skills. While these skills may exist, finding and retaining quality people is a challenge. Of particular concern is the ability to attract enough young people to the industry, identified by 65% of respondents.



Employers in the study also report they struggle to transfer knowledge to new recruits from the established team, highlighting that finding and recruiting employees is only part of the skills gap crisis. Even businesses with the right number of employees may still have a crisis if they can't develop these employees with the right knowledge and specialist skills.

The effects of the skills gap are clear to respondents of the survey – they see them correlating directly with reduced profitability and growth.

Therefore, employers need to understand that addressing the skills gap crisis will help them reduce costs, grow their business and compete more effectively.

Fujitsu believes that meeting these challenges is as much about ensuring Talent Management and Recruitment processes are optimised, as it is about cultural and technological change. If businesses in EUBE sectors can build a culture of knowledge sharing and collaboration, enabled through the right digital tools, they can improve their ability to recruit the right workers and give them the knowledge they need to be productive.

How are these recruitment and talent management challenges affecting you as a company?

Percentage of respondents



The skills challenge breakdown

There are several important differences in what employers identify as the key challenges facing their business when it comes to the skills gap. These vary according to sector and job category.



- Just under 4 in 5 (78%) business owners with a company in the energy sector think the biggest recruitment and talent management challenge is to attract enough young people, in comparison to just over half of business owners with a company in the engineering sector.



- Over half (54%) of directors and above in the energy, utility and built environment sector think that the biggest recruitment and talent management challenge is retaining good employees.



- Half (50%) of senior managers and above in the EUBE sector think that the biggest recruitment and talent management challenge is transferring knowledge to their new recruits from the established team.

Employers therefore need to have a good understanding of what the skills gap challenge means for them in their unique situation, and this means gathering input from all levels of the business. Once these requirements have been identified, businesses should address them through a tailored Talent Management and Recruitment strategy supported by relevant communications channels and tools.

IT skills top corporate agenda

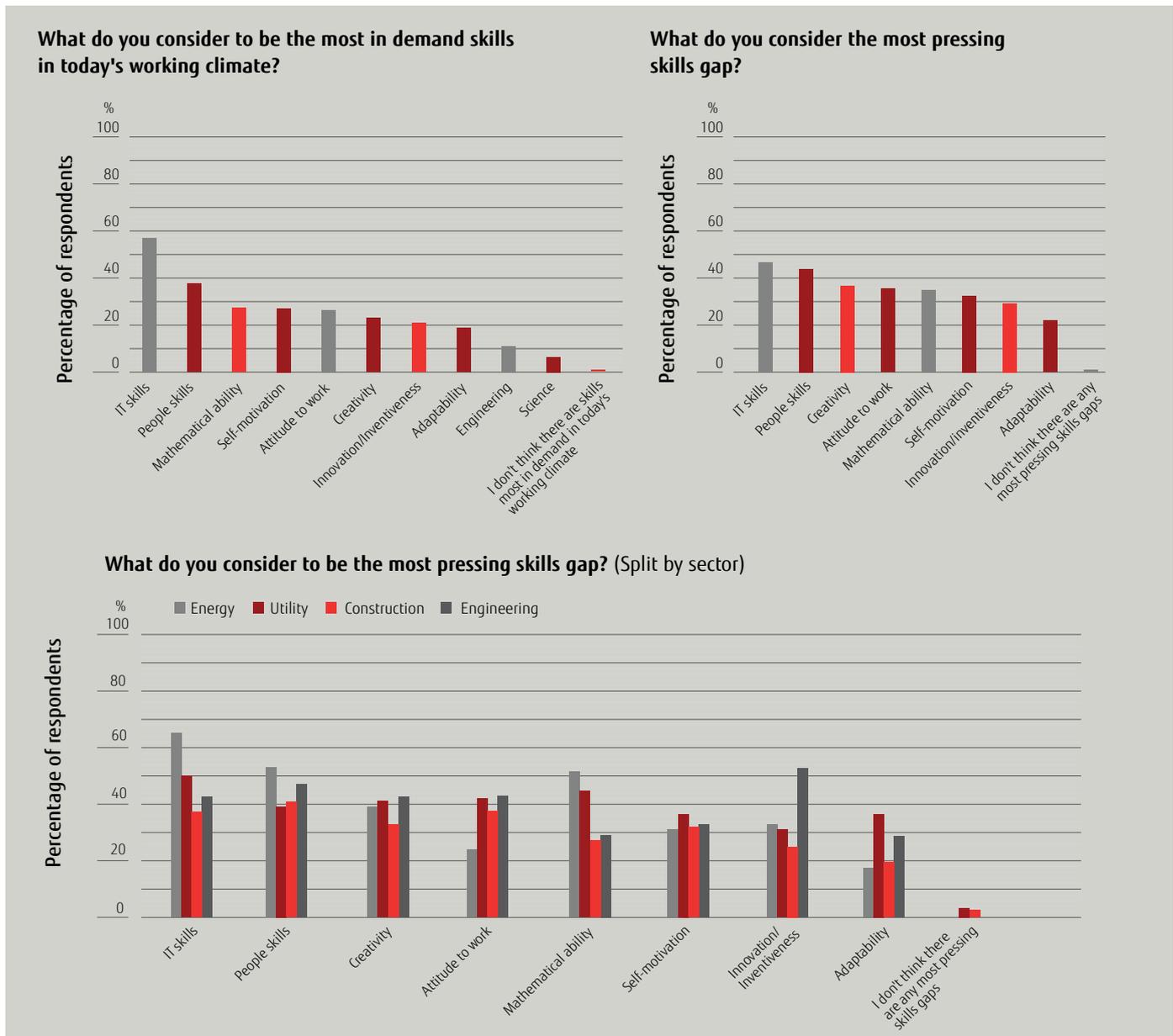
Forty-nine percent of employers surveyed identified attracting enough people with the right skills as a key challenge. But what skills are required?

Significantly, IT skills (57%) top the list of those required by businesses, well ahead of skills 'traditionally' considered core to careers in the EUBE sectors, such as mathematical ability (28%), engineering (12%) and science (8%).

Unsurprisingly, employers perceive a pressing IT skills gap, particularly in the largest companies and in energy businesses.

The survey of young people about to choose their GCSE options will therefore make worrying reading for businesses. Only 24% of young people surveyed are considering studying IT at A Level, B-Tec or NVQ.

We are at a critical moment for businesses in EUBE sectors. The survey suggests that organisations must focus on recruiting young people with IT skills. This is the gap that must be bridged to safeguard the future of these important sectors. Moreover, more needs to be done at school level to encourage young people to further their IT education by highlighting the relevance of these skills to future careers.



Can the industry find the talent it needs?

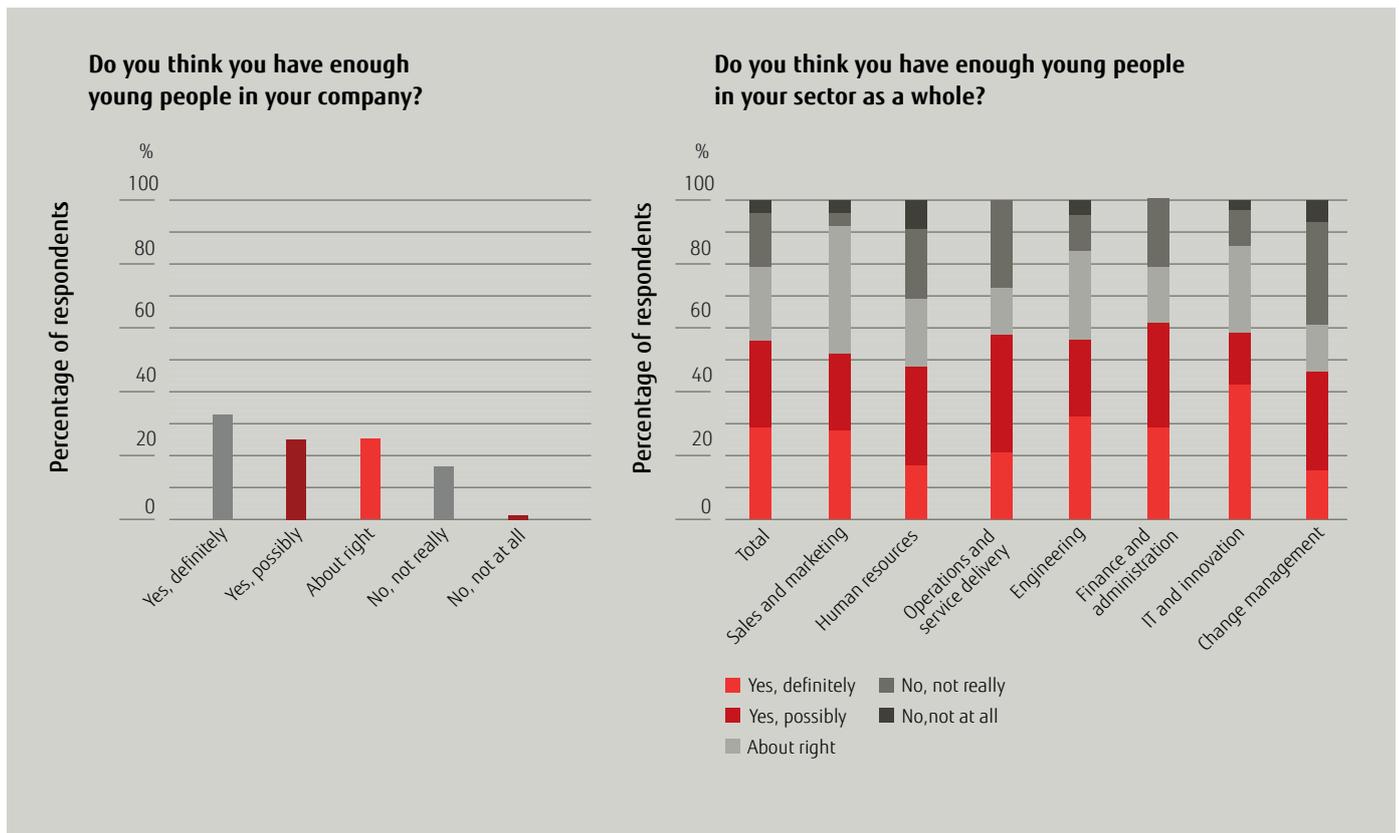
Attracting young people to the sector offers a response to the skills crisis. But a perception gap has emerged between businesses and young people, which renders businesses unable to attract young people in sufficient numbers.

Businesses recognise the need for younger workers

A significant number of businesses realise that young people represent an important pool of future talent. However, at present only about 33% of respondents to the employer survey believe they definitely have enough young people in the company. Although this number increases to 43% in the largest companies. Similarly, only 56% of respondents feel they have enough young people in their sector; although responses from the energy sector are more positive at 67%. Only around 30% of respondents recognise an emerging skills crisis.

The results become even more interesting when broken down by job title. 30% of respondents from HR roles state they do not think there are enough young people in their sector as a whole, 10% higher than the overall average. HR professionals, who are arguably better placed to comment on the issue, are therefore more pessimistic than the wider business.

Clearly, employers understand that attracting young people in greater numbers offers a response to the skills crisis. One solution could be bringing young people on board within a framework to deal with both skills transfer and instilling the right mindset, such as apprenticeships and graduate schemes. Indeed, the employer survey shows that businesses are aware of this fact: 54% of respondents cite offering more apprenticeships as a means of identifying and engaging with the next generation workforce.

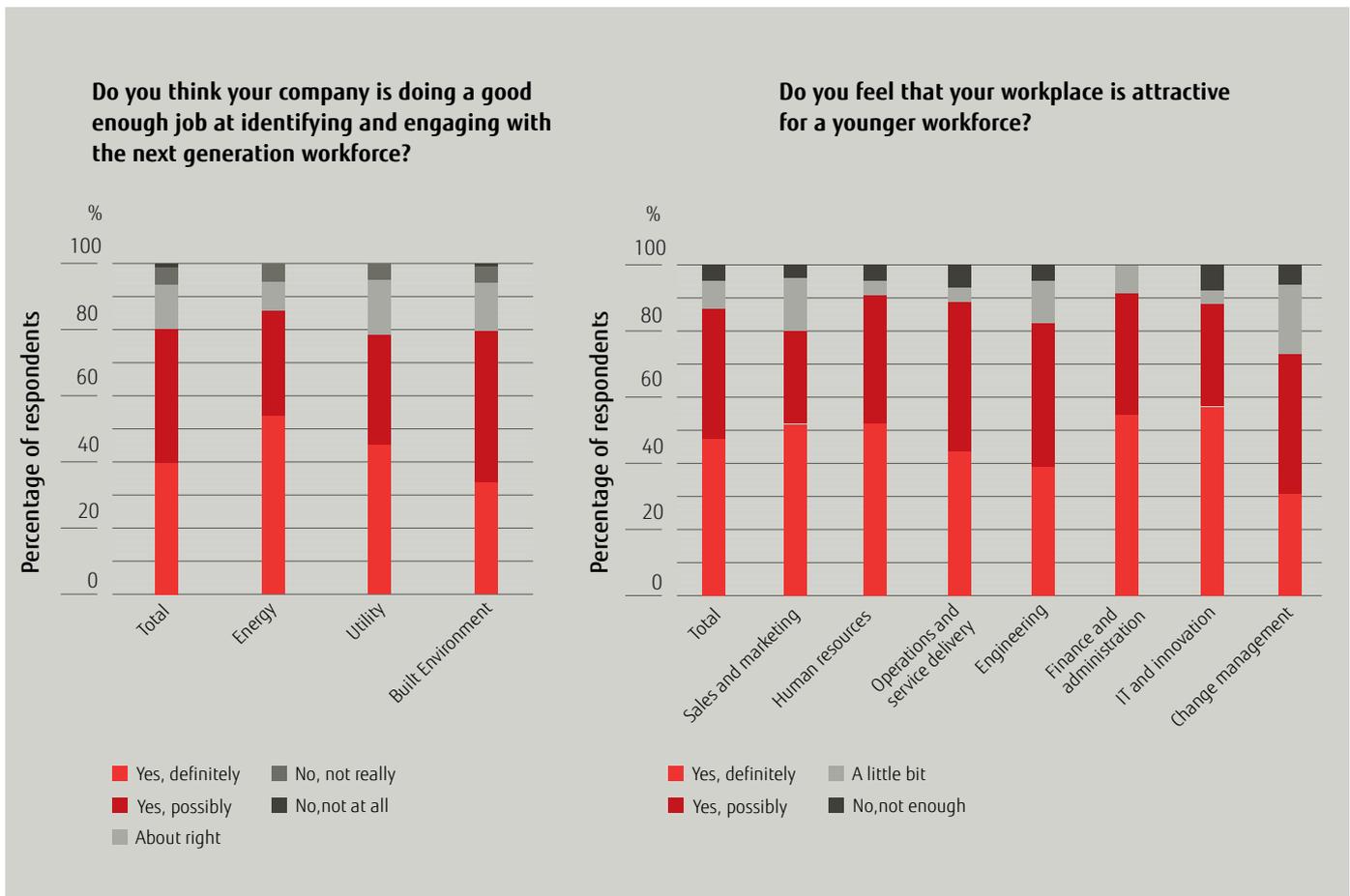


The employment perception gap

While respondents to the employer survey understand the importance of attracting young people to their sectors and companies, the study reveals a significant perception gap that will affect the ability of businesses to attract talent to the sector, even with apprenticeships in place.

A majority of companies surveyed (80%) think they are doing a good enough job, or possibly doing a good enough job, at identifying and engaging with the next generation workforce. Respondents from engineering (86%) and energy (84%) are most confident of their efforts; construction (78%) and utilities (78%) slightly less so.

Similarly, nearly half (47%) of respondents say they have already done enough to make their workplaces attractive for a younger workforce. Interestingly, change managers are less sure (32%) – often the very people who understand the reality of workplace cultures.

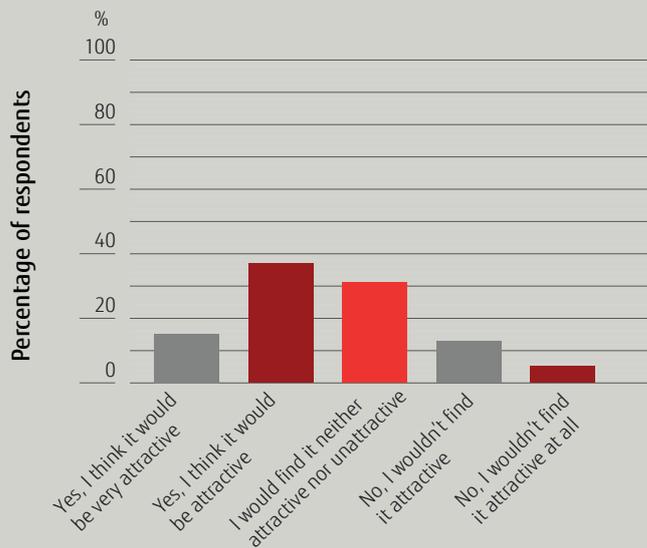


The reserve of change managers may more accurately reflect the reality. Our survey of the next generation (young people about to choose their GCSEs) highlights that they're not particularly interested in careers in EUBE, standing as a stark contrast to the perceptions displayed here.

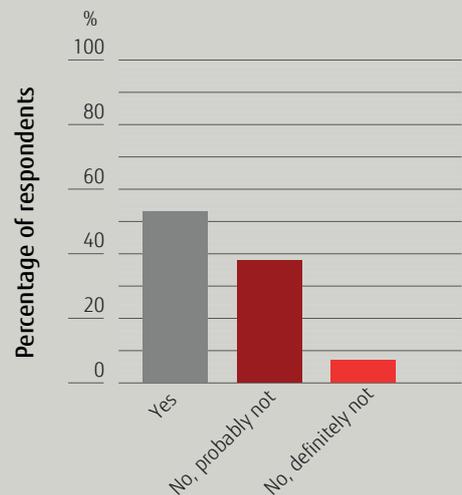
If you ask employers, this negativity towards EUBE sectors comes from a misunderstanding of the sectors. Only 54% of respondents to the employer survey feel that young people have an accurate perception of their sector. Interestingly, team managers are much more negative about the perceptions of young people, with 79% believing those perceptions to be inaccurate.

There is a clear imperative for the sector to do more to raise understanding of careers in the sector with young people, to change their perceptions and to target them more effectively. The current false sense of security needs to be replaced with a sense of urgency, and businesses must do more to raise awareness of the industry as a high-tech, IT-driven career option.

Do you think a job in the energy, utilities, and built environment sectors would meet your expectations of a good place to work?



Do you think young people have an accurate perception of your sector?



How to reach the younger generation

Business must harness digital technology and collaboration tools, engage young people with the right information, and transform HR to bridge the perception gap and address the skills crisis.

The right information at the right time

Over half (51%) of children undertaking decisions around which GCSES to take think EUBE sectors would meet their expectations of a good place to work. However, the survey suggests this could be even higher, as at present young people have a fairly negative view of the sectors. Overall, young people believe the sectors involve long hours (38%), are labour intensive (35%) and boring (22%).

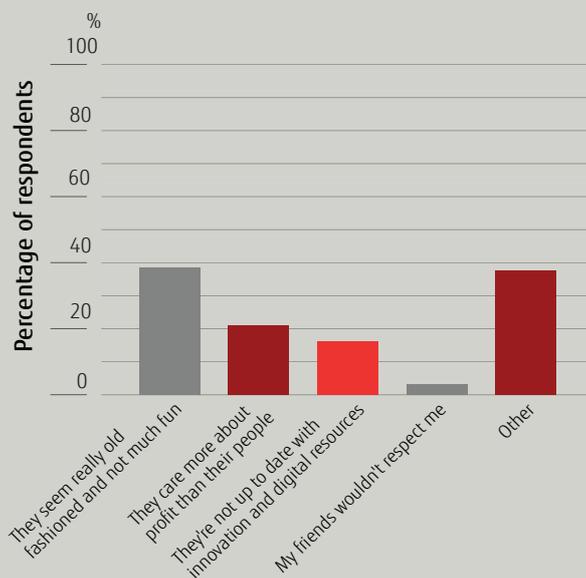
Businesses and other stakeholders must do more to change perceptions. This involves both making young people aware that jobs in the sector are not old fashioned and labour intensive. Beyond raising awareness of the sectors, businesses must educate on what constitutes a career in the industry.

This involves two streams of education.

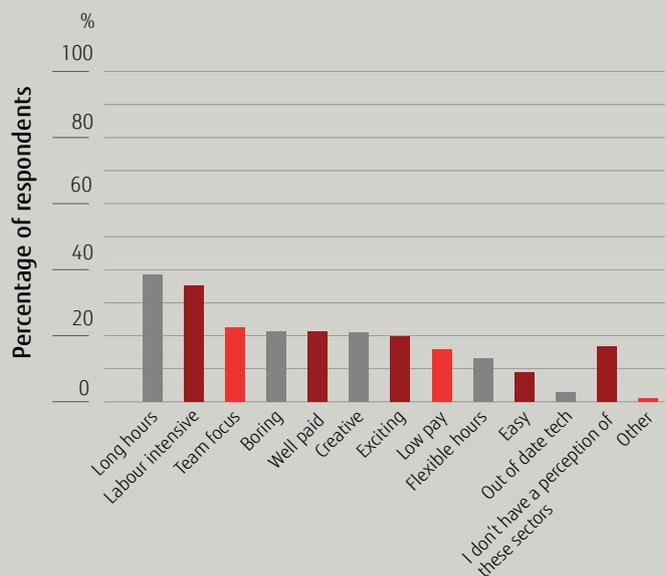
On the one hand is the need to provide solid information on the career path within the sectors, showing how quickly people can expect to rise up the ranks and what each position relates to in terms of remuneration (only 21% of young people surveyed believe the sectors to be well paid).

The second stream involves education on what modern careers in these sectors actually involve. For example, with the digital revolution a career in modern day construction would likely involve everything from drone piloting to survey field sites to the use of augmented reality tools to aid real world construction.

Why do you think a job in the energy, utilities, and built environment sectors would NOT meet your expectations of a good place to work?
(Base: students who were negative about the potential of the sectors as a good place to work.)



What is your perception of the energy, utility, and built environment sectors?





**'I don't know enough about the sector but sounds a bit boring'
'I'm more interested in computing'**

Survey respondents reply to question on why they don't want to work in the EUBE sectors.

Therefore, the perceptions gap can be bridged by providing the right information to young people.

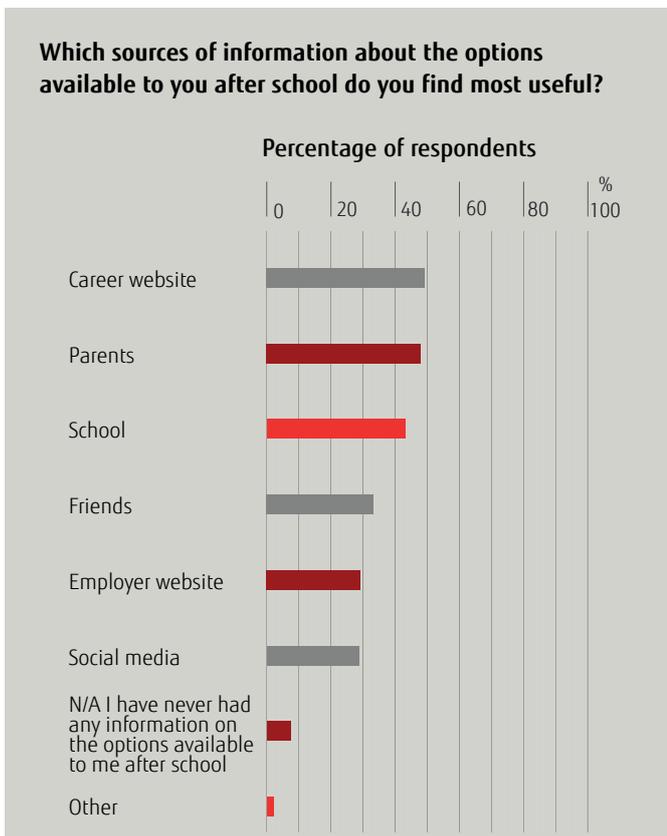
In terms of where this work needs to take place, respondents to the employer survey believe that schools remain the most important starting point for career information. However, employers in the survey are pessimistic about the ability of schools to deliver on this requirement, with only 53% of respondents felt schools are even partially adequate in providing career information.

This perception is supported by the survey of young people. When asked to describe the kind of jobs their school provides information on, only 38% listed engineering and 18% energy/utilities.

Meanwhile, only 20% of respondents are aware of career opportunities in electricity companies, 18% in construction, 12% in water companies and 9% in energy distribution companies.

Moreover, young people report looking to a much wider range of sources for information, beyond school (44%), including career websites (50%) and parents (48%).

Closing the perception gap comes down to giving young people the information they need, over a wide range of channels, to make an informed decision. Currently few businesses in EUBE sectors appear to be doing this, providing a clear competitive differentiator in the war for talent.



What young people really think

- Long hours top the list of young people's perceptions of the EUBE sector (38%)
- More than a third (35%) of young people undertaking decisions around which GCSEs to take think that the EUBE sector is labour intensive
- More than a fifth (22%) assume this sector is boring and low paid (16%)
- A quarter (25%) of boys think that the EUBE sector is creative, compared to 15% of girls
- Boys are more likely to think the EUBE sector is exciting with 23% of boys and only 16% of girls relating this to the sector
- Boys are also more likely to think the sector is easy with 1 in 8 (12%) assuming this compared to 5% of girls

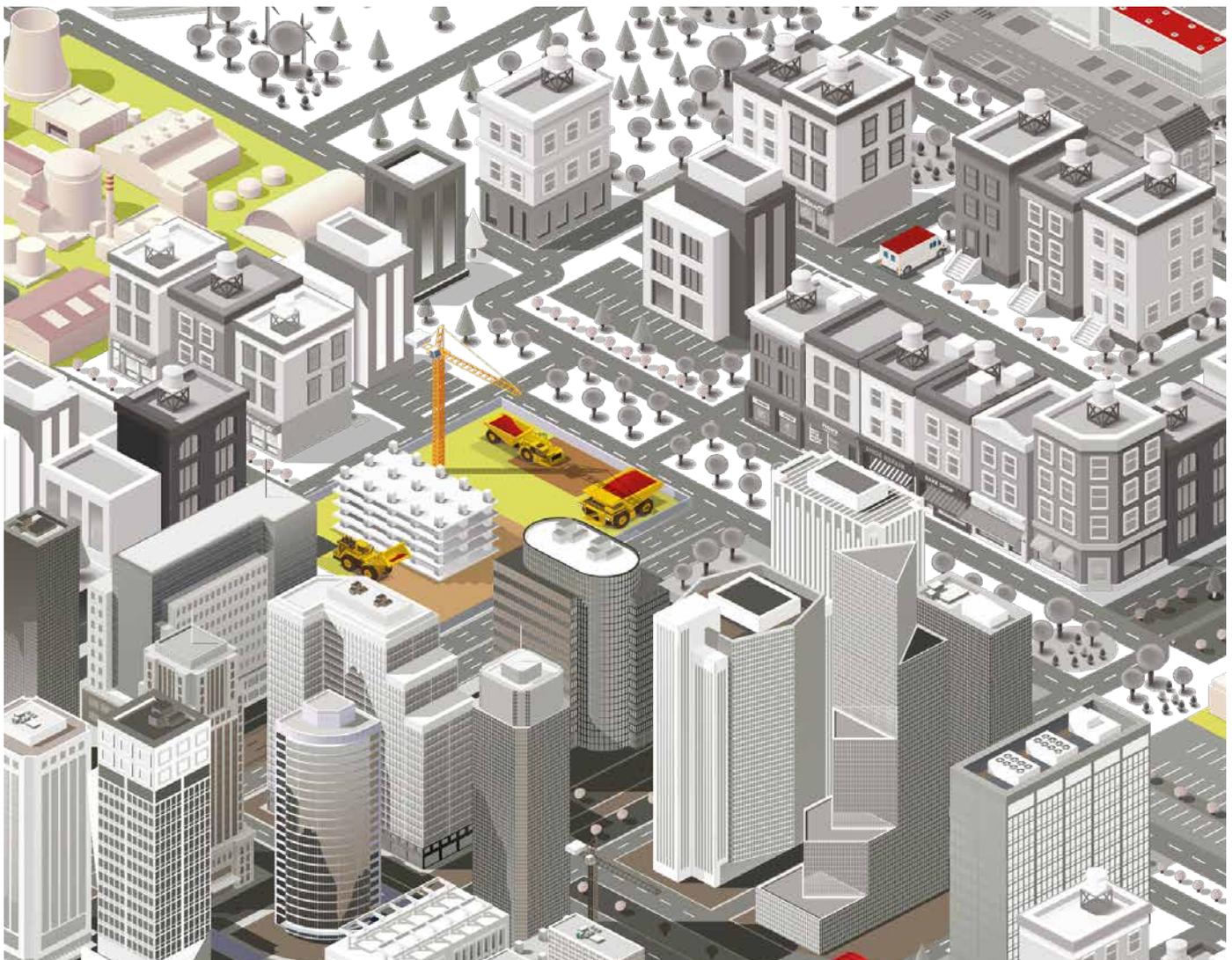
Digital transformation and the virtuous employment circle

Business efforts to attract young people to the industry must go beyond Talent Management and Recruitment campaigns, it also demands significant cultural and technological change.

Much of this change is already required due to the rise of digital technology. Businesses in these sectors – as in all sectors – must evolve to digital platforms and business models if they are to survive. It is telling that new digital business models are the principal reason why just over half of the names of companies on the Fortune 500 have disappeared since the year 2000; businesses must evolve or risk being overtaken.

Interestingly, Fujitsu's research shows that 89% of young people surveyed would be attracted to work in an industry they knew used state of the art technology. This implies that the act of digital modernisation itself will help businesses in EUBE sectors attract the young workers they need.

In effect, implementing digital technologies within these sectors creates a virtuous circle whereby the young talent required by organisations is more easily recruited, which in turn fuels further digital modernisation.



Make employees brand ambassadors

As organisations compete for young talent, the role of HR is going to be crucial. As the gatekeeper of corporate culture as well as the driving force behind Recruitment and Talent Management, the more sophisticated and advanced the HR function, the more likely the chance of success.

Organisations should therefore look to deploy advanced, cloud-based Talent Management applications to ensure young people can be found, recruited and engaged at work effectively. HR needs to take an active role in creating company processes that are human-centric and designed specifically to appeal to Gen Y workers, such as offering flexi-time and home working options where available. This also includes providing the right digital tools for employees to use in their work, such as social collaboration tools, mobile devices and augmented reality software. All IoT connected and AI enabled as an instant, simple means of accessing new information.

Another important change, and one identified in the research study, is for HR to make better use of existing employees and their social networks to find and recruit the next generation workforce. The survey of young people revealed that 78% are more likely to go into a career that someone in their immediate 'social bubble' (i.e. family, friends etc.) already works in. This finding suggests that a young person's immediate social bubble is a major influence on their future career.

Interestingly, the research also suggests that employees are sharing a largely negative view of the industry with their family and friends. On average 42% of young people with family or friends already working in EUBE sectors are likely to think jobs in the sectors demand long hours, compared to 35% of young people without family or friends in the sectors. Similarly, 42% of young people with family or friends in the sectors view such jobs as labour intensive, compared to 34% of young people without family or friends in the sector.

These results imply that while young people are more likely to go into EUBE sectors if someone in their social bubble already works in one, they do so reluctantly.

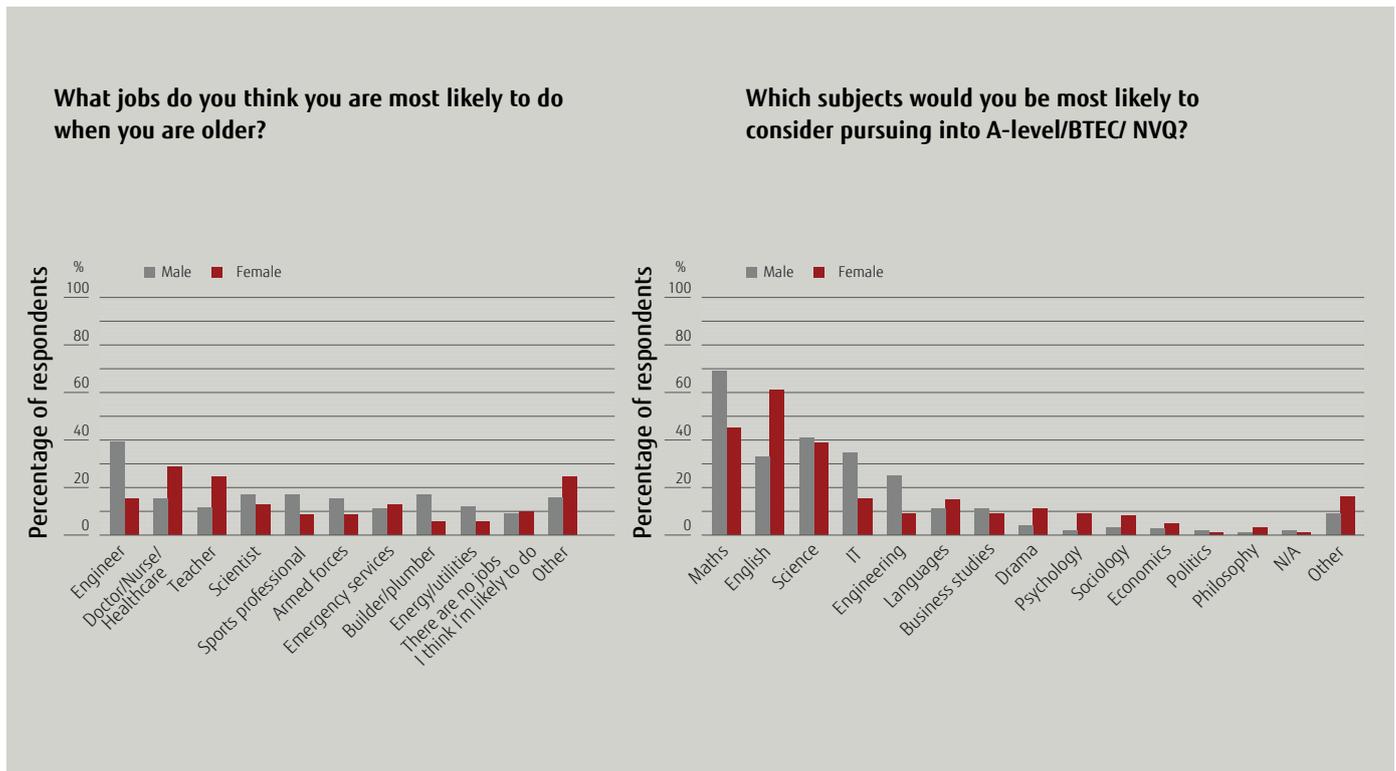
If HR can instead use existing employees as brand ambassadors to highlight the high-tech digital credentials of the industry, and to provide a more up-to-date image of current working hours and practices, they stand to gain an important tool for recruiting young people. Such an approach can be used by encouraging existing employees to showcase their work on social media; deploying more digital within the organisation will help them to do this.

Attracting Gen Y workers

Gen Y has a new set of expectations of their employers, based on the experience of growing up in a world of smartphones and social media. Fujitsu recommends organisations adopt new cultures and technologies to help attract workers from this demographic:

- Develop new recruitment strategies to engage with the next generation on their own turf – social media and photo/video sharing platforms
- Replace rigid organisational structures, inflexible working practices and siloed teams with an environment that enables and encourages collaboration, as well as the ability to work from a number of different locations
- Employ flexible working patterns to promote a strong work/life balance
- Replace outdated corporate technology with modern alternatives; social media, wearable technology and augmented reality displays to promote knowledge transfer between generations
- Enable the workforce by embracing 'Bring Your Own Device' to increase workplace satisfaction and boost productivity

Encourage females into the workforce



A simple way employers can do more to encourage young people into EUBE sectors is to encourage more girls to pursue a career in them. The research study highlights that girls are currently less likely to pursue a career in EUBE sectors, or to study subjects that could lead to such a career.

Businesses should therefore work to actively encourage more girls into EUBE sectors, not just superficially, but for the practical reason that they are an untapped resource that should be targeted directly.

One way to do this is to take a human-centric approach to company culture and processes to support the differing needs of every individual in the workforce. HR should tailor outreach and recruitment programmes to appeal more directly to women, expressing that the labour intensive jobs of today may not be so in the future; new roles are likely to appear. Going forward, communications should emphasise that careers in EUBE sectors are not gender specific.

Conclusion: A sector at a crossroads

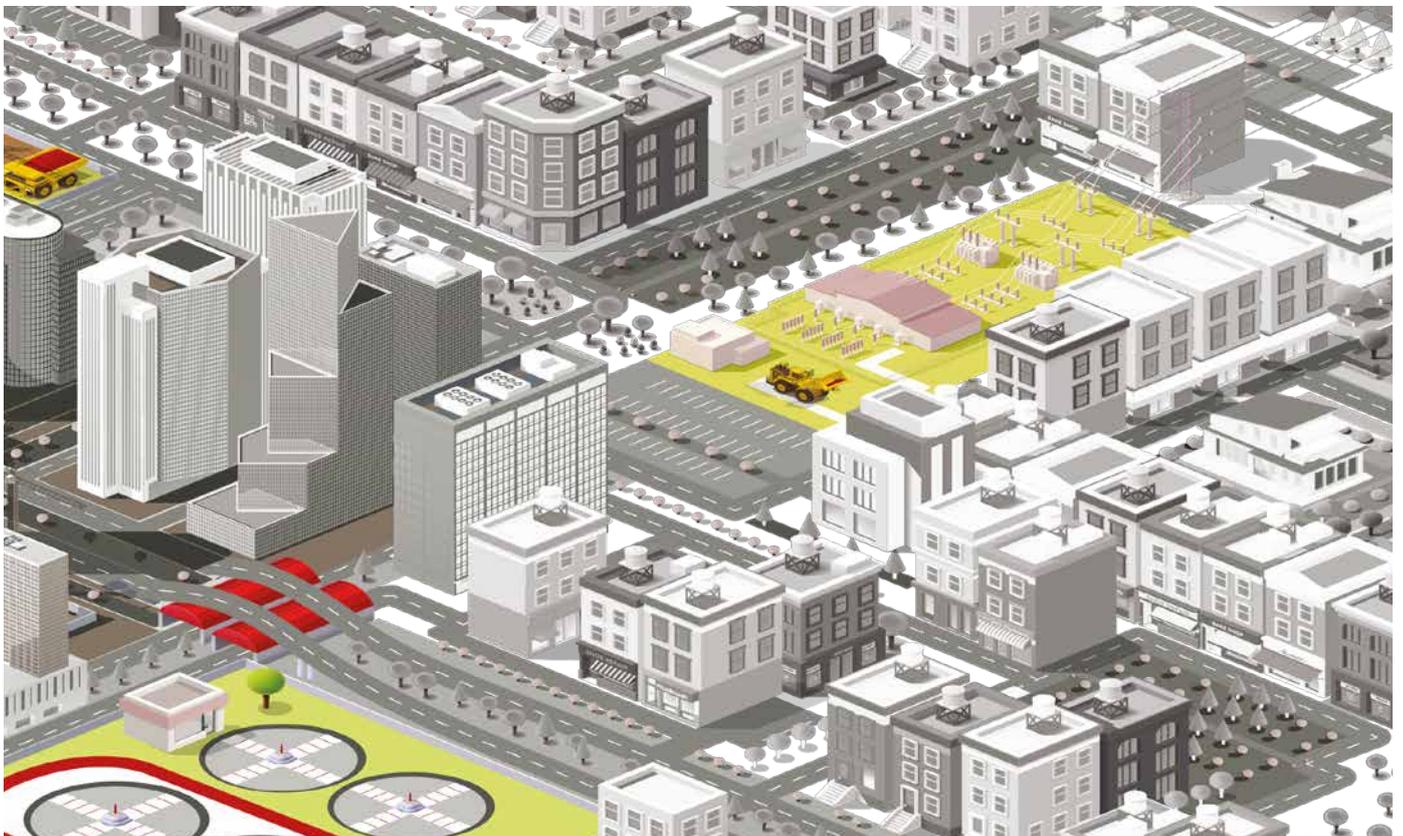
EUBE sectors cannot be complacent: they must do more to attract young people.

The Fujitsu Energy, Utility and Built Environment Survey 2016 paints a picture of an industry on the brink of a skills crisis. Businesses are aware of the skills gap and understand the need to attract a new generation of workers into the industry, but many erroneously think they are already doing enough in this regard. Young people, on the other hand, view the industry as outdated and labour intensive and only half of respondents would currently even consider working in it.

As businesses gear up to address this skills gap technology is going to play an important role. Digital tools will help organisations run their operations more efficiently, reducing their workforce requirement while at the same time creating modern working practices that appeal to the younger generation.

Digital will also help HR evolve to deliver multi-channel recruitment communications that reach young people on the devices and platforms they use, and take them step by step through the employment journey. Finally, technology will create a virtuous circle where digital modernisation acts as an incentive to future employees, who then help fuel further modernisation.

But technology by itself will not be enough to solve the skills challenge, there needs to be cultural change too. Business must be more proactive in reaching out to young people, using available technologies to educate them about the new career options open to them in the future. By applying the principals of pre-emptive maintenance to recruitment, companies can improve the way they find and engage young people, ensuring that they accrue the talent their businesses need.

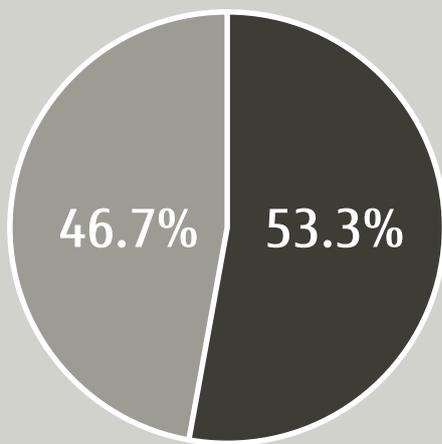


Research methodology

The survey examining students' and employers' perspectives of the EUBE sectors was commissioned by Fujitsu and carried out by Census Worldwide, a research company.

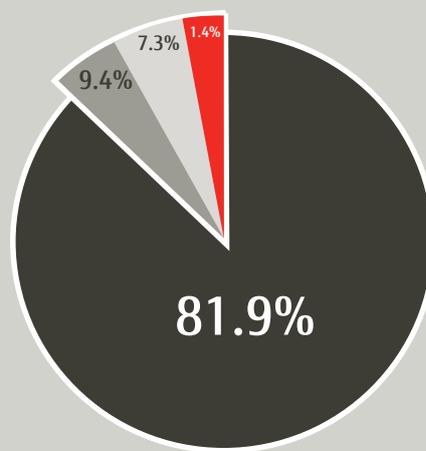
The student survey comprised of 1004 students, aged 13 or 14, who are making decisions on which GCSEs to take. The research activity ran from 16th August 2016 – 7th September 2016.

Split by gender:



- Male
- Female

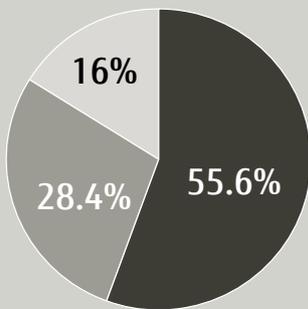
Split by education sector:



- State
- Private
- Grammar
- Specialist

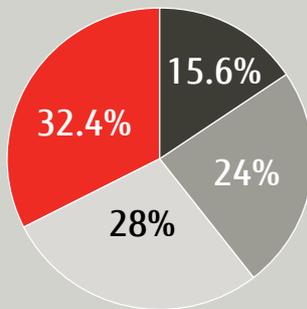
The employer survey comprised of 250 directors, senior managers and business owners (in companies of 50+ employees, who have input in recruitment OR people management), in energy, utilities and the built environment sectors. It ran from 19th – 26th August 2016.

Split by job description:



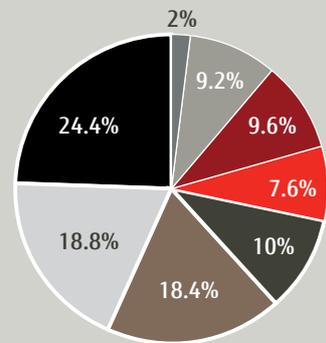
- Owner
- Director
- Senior Managers

Split by size of business:



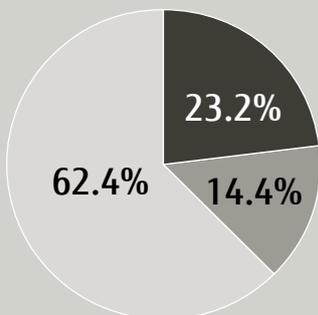
- 50-99 employees
- 100-249 employees
- 250-500 employees
- More than 500

Split by department:



- Other
- Human Resources
- Finance and Administration
- Change Management
- Sales and Marketing
- Engineering
- Operations and Service Delivery
- IT and innovation

Split by sector:



- Energy
- Utility
- Built Environment

Act now



Discover how Fujitsu can empower your people to effectively address the skills shortage and attract the workforce of tomorrow. Join experts including Graeme Wright for a roundtable discussion at a time convenient to you.

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ABOUT FUJITSU

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Fujitsu is a world class technology partner with a proven track record in integrating IoT for operational excellence and innovation.

Fujitsu enables businesses to become 'Always connected', leveraging all their assets and workforce, to unlock complexity, innovate and meet their business demands.

Fujitsu believe human centric ICT can help create a more intelligent society, a better place for human beings and a better place to conduct business.

This in turn creates a sustainable world where we can live and prosper.

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