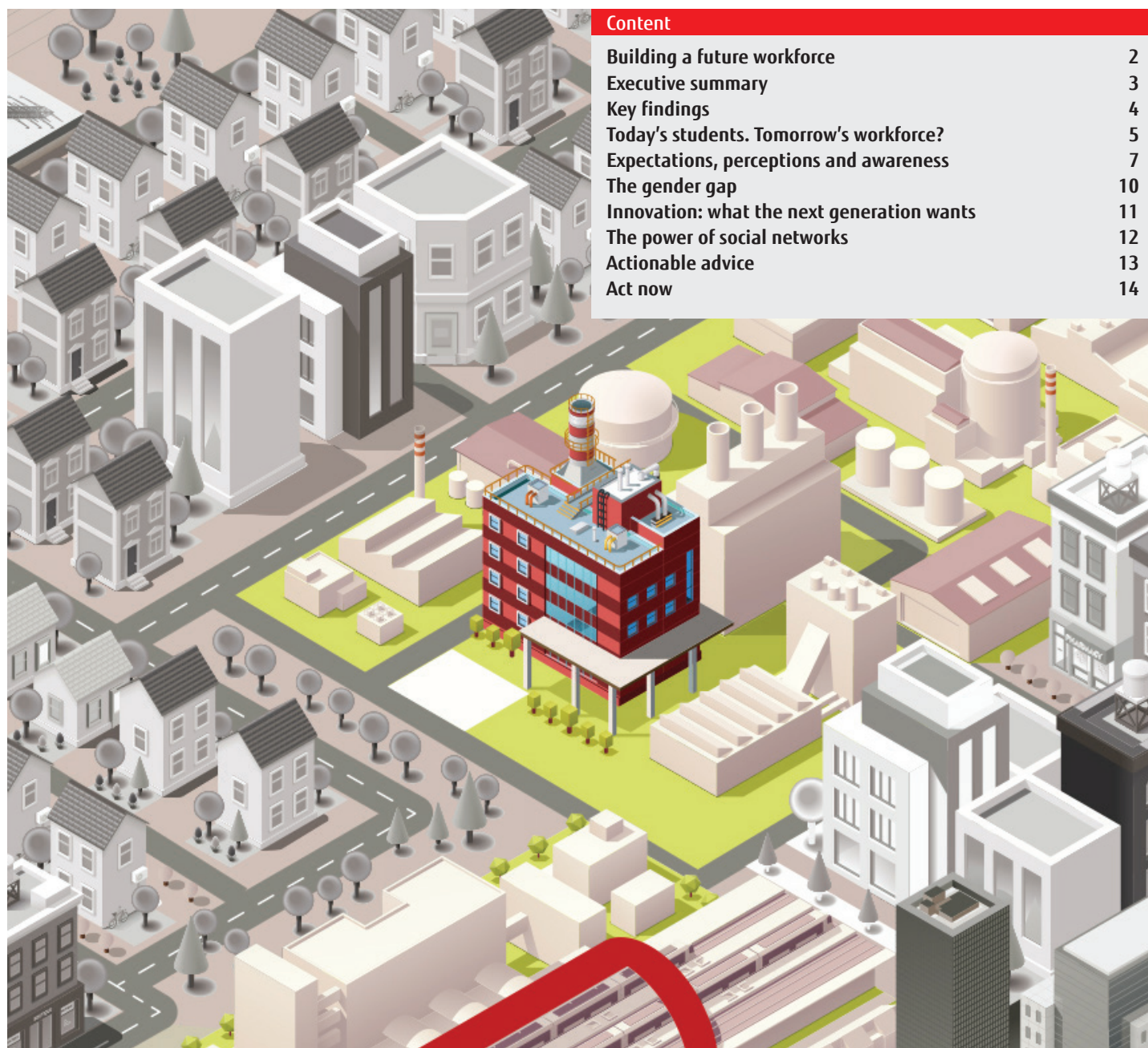


White Paper

The Fujitsu Energy, Utility and Built Environment Skills Survey 2016

A Student Perspective



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Building a future workforce

As mature workforces edge towards retirement, demands for new skills increase while the talent pool shrinks. There simply aren't enough young people entering the energy, utilities and built environment sectors, making the need for employers to understand recruitment and talent acquisition challenges more important than ever. With greater insight, employers can take the right action using the right channels.

To help employers in this effort, Fujitsu has commissioned research to investigate the skills shortage and get the bigger picture. In this report, the second white paper of our Skills Gap series, we look at the skills shortage from the perspective of today's young students, tomorrow's talent. The research investigates career choices of those who intend to finish formal education at GCSE and those who will continue. We further look at their preferences for, and perceptions of, the energy, utilities and built environment sectors.


Our aim is to stimulate greater debate, so that together we can help drive better outcomes for skills and growth within the industry.

I hope you find the paper useful and informative.



Graeme Wright
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Executive summary



"The skills agenda is fast becoming one of the biggest priorities for UK business, with Brexit also likely to impose some restrictions to the free movement of labour in the future. It has never been more important to ensure the UK has the right mix of skills and talent, both nationally and locally, and young people are core to this."

Mark Gregory, EY Chief Economist, UK, 2016

Image and reality. As parts of this survey demonstrate, the gap between these two concepts can often become a chasm. Countering perceptions (and misconceptions) and painting a picture of the energy, utilities and built environment (EUBE) sectors as a forward thinking and desirable future career path is one of the tasks that awaits.

The research – based on a survey of 1,004 13 and 14 year-old students – throws up a number of fascinating findings, some of which underscore long held assumptions and others which directly challenge the consensus.

It sheds light on the attitudes and expectations of students contemplating a critical period in their academic life and beyond. It sheds light on their aspirations and their perceptions of the working world. In doing so, it also reveals both the challenges and opportunities that face EUBE sectors.

About this survey

The UK based survey examined students' perspectives of the energy, utility and built environment sectors and was commissioned by Fujitsu and carried out by Census Worldwide, a research company.

The survey comprised of 1,004 students, aged 13 or 14, who are making decisions on which GCSEs to take. The research activity ran from 16 August 2016 through to 7 September 2016.

Key findings

Career choices

Engineering is the top career choice among male students (38.9%) but features in third place among female students (15.8%) behind a job in healthcare or education.

Apprenticeships

One third of students are unaware of apprenticeship opportunities in the energy, utilities and built environment sector. Of those who are aware, one in five (19.3%) aren't interested in pursuing the opportunity. 43.2% are interested, but not all of these students will have the talents needed by these industries.

Meeting expectations?

Over half of students (51.2%) thought a career in the sector would meet expectations as a good place to work. However, when the sector is broken into its component parts, there was less enthusiasm: just 14.7% agreed that a career in energy distribution would appeal.

Awareness

Energy retailers, such as British Gas (79.1%), N Power and E-on (both 61.4%) naturally lead the way as the most recognised brands in the sector. However, most students remain unaware of job opportunities in those and other firms. For example, only one in five (20.2%) are aware of job options in utility companies.

Gender remains an issue

Only 16% of girls can relate to the sector compared to 23% of boys who see it as exciting.

Innovation matters

Asked whether they would be attracted to work in an industry if they knew it had state of the art technology, an overwhelming 88.7% said yes.

Social bubbles

Two thirds of students (63.1%) say they don't know anyone who works in the energy, utilities and built environment sector – implying that connecting with the next generation could become a challenge.

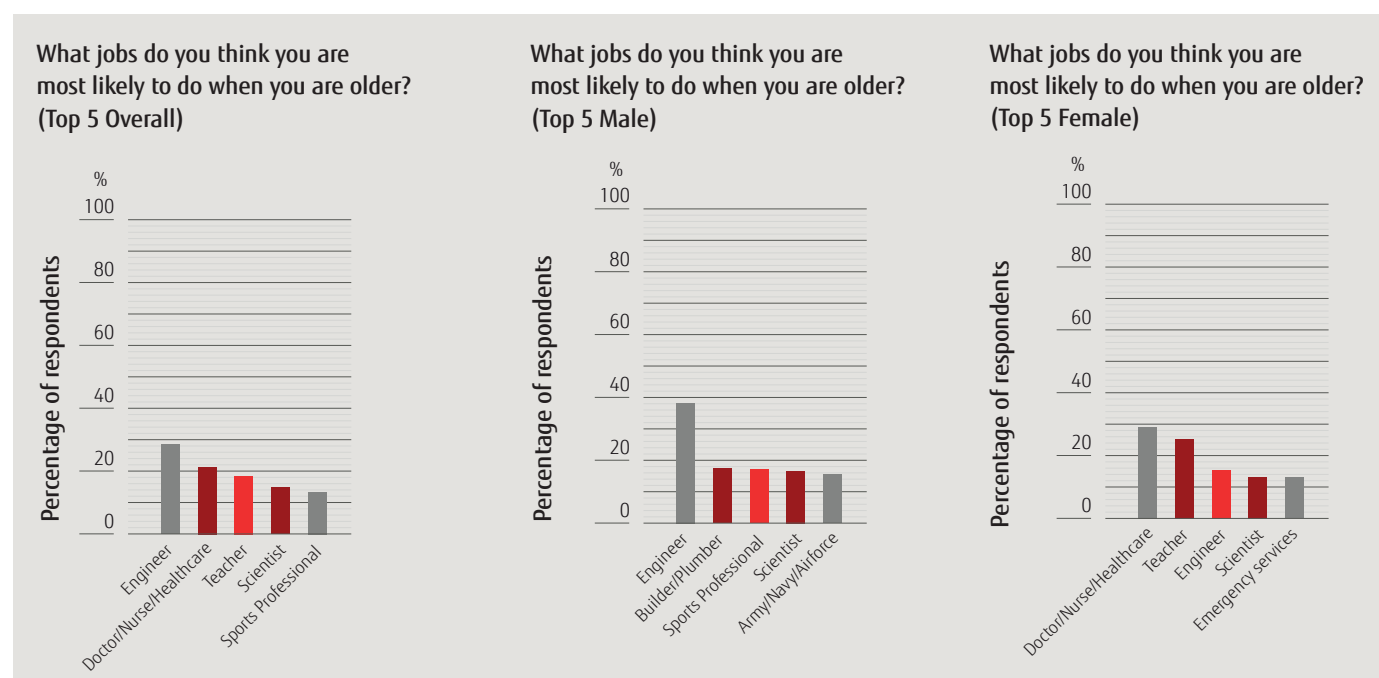


Today's students. Tomorrow's workforce?

What are the aspirations of today's student body, many of whom will be entering the workforce in the next two years? Which careers do they wish to pursue? What is their attitude towards talent schemes? And would they consider EUBE as a potential career path?

When asked to suggest what job they are likely to do when they are older, this cohort of 13 and 14 year-olds – soon to embark on their GCSEs – chose an array of career options. Across all demographics, engineering topped the list of likely jobs at 28.1%. Although, there was a distinct difference between genders, with 38.9% of males choosing it against 15.8% of females.

While the engineering numbers offer some qualified good news for EUBE sectors, other results do not. For example, just 9% of all respondents said they were likely to work in energy or utilities.



Continuers and non-continuers

The research sought to identify the views of those planning to leave school post-GCSE, that is at the age of 16, and those intending to stay on into further education.

Appealing to both audiences, means understanding their aspirations as well as their perceptions of the industry sector.

In order to tap into this warm pool of students intending to leave school straight after their GCSEs, recruiters need to connect with them while they are at school. They also need to ensure they're communicating the right message, one that nurtures a positive perception of the industry.

As the research shows almost 9 in 10 students said they would be attracted to a job in an industry if they knew it had state of the art technology. However, nearly 46% of students have said that a job in EUBE sectors would seem really old fashioned and not much fun.

Conversely, companies could also target students thinking of continuing education while they are at school with communications that highlight the career prospects across the spectrum – attracting highly academic students into graduate schemes as well as those who are less academic.

The post-GCSE leavers

1 Consistently less familiar with EUBE companies

2 More likely to think a job in an EUBE company would meet expectations

3 More aware of job opportunities, particularly in construction and logistics

4 Less likely to get information from their parents, more from friends

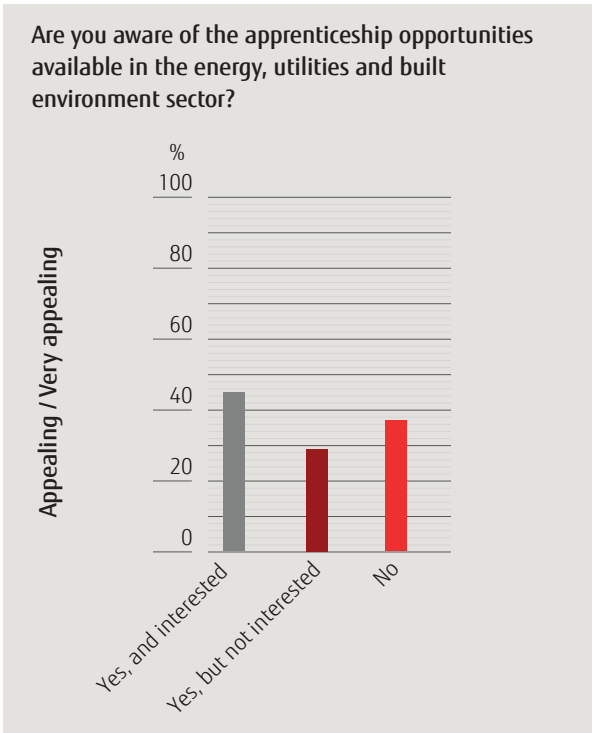
5 More likely to think a job in EUBE companies are creative and exciting, as well as easy but with low pay

6 More attracted to technology

Apprenticeship appeal

Asked about their awareness of apprenticeship schemes in EUBE sectors, 43.2% said they knew about the schemes and were interested in pursuing them. Meanwhile, a further 19.3% said they were aware but not interested and 37.5% said they were unaware of apprenticeship schemes.

As elsewhere, levels of awareness vary along gender lines – exactly half of all male respondents (50.0%) know about the schemes and are interested in them, compared to just 33.2% among female students. More marked are the levels of awareness at private schools compared to state schools. Just 12.3% of those at the former remain oblivious to apprenticeship schemes while 43.4% of state school students are in the dark about them.



Expectations, perceptions and awareness

EUBE sectors have an image problem among a significant proportion of the future workforce. And then there are those that don't even know these companies exist.

Expectations and perceptions

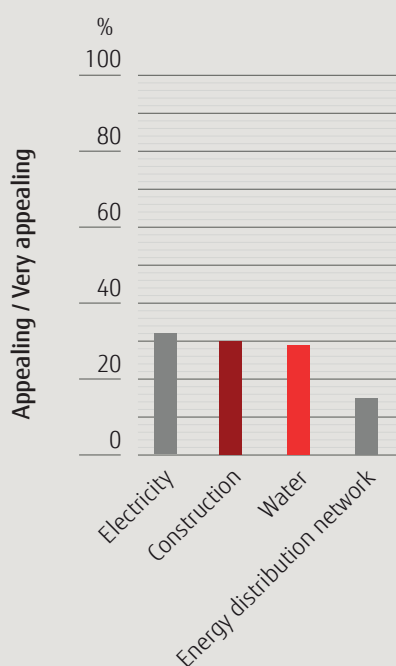
When asked whether a job in these sectors would meet expectations as a good place to work, a healthy 51.2% said they thought it would be attractive or very attractive. Interestingly, private school students are more attracted (61.7%) than the average while London based students are most enthused (60.4%) and those in the Midlands least enthused (41.0%).

One in five (18.2%) of all students said they would find it unattractive or very unattractive.

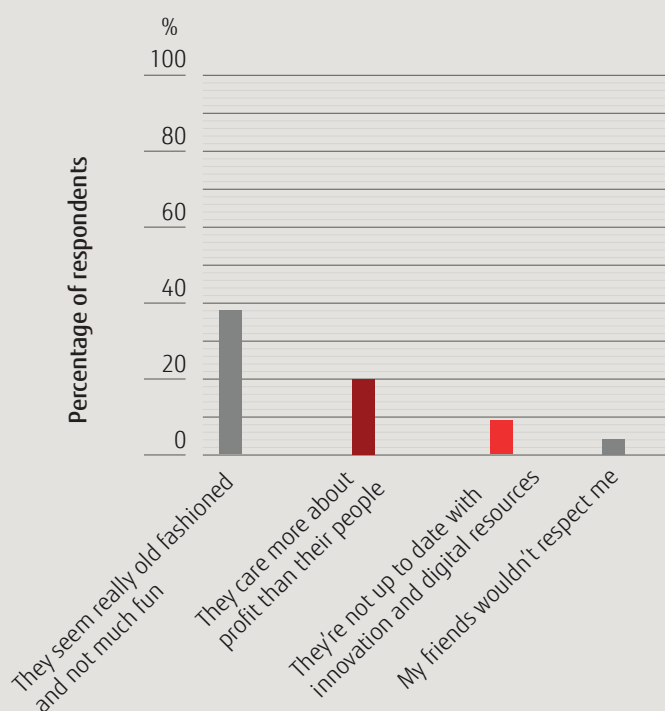
Dig a little deeper, however, and the responses become more equivocal. When asked how appealing they would find working for one of these industry sub-sectors and example companies, around one third said electricity (31.6%) and construction (29.8%) would appeal – fewer expressed an interest in water companies (18.6%) and energy distribution firms (14.7%).

Among those who are not attracted, the obvious follow-up question is why not? Common responses to this question included: "boring", "dull", "too male dominated" or a variation of "It's not really my thing".

How appealing would you find a job for these companies?



Why are jobs in this sector not attractive?

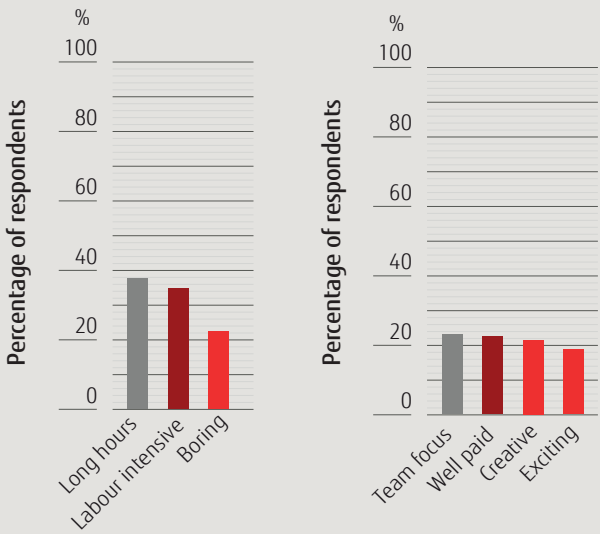


Notably, those in the North East (70%) and South West (61.5%) were most concerned that the industry was “old fashioned and not much fun”, while those in the East (16.7%) and Yorkshire (26.7%) were the least concerned. Meanwhile, it appears that as students get older, disillusionment seems to grow. For example, 11.2% of 13 year-olds agreed with the statement that these companies “care more about profit than their people”. By the age of 14 that figure had reached 28.7%.

Finally, the students were asked to choose words to describe the likely experience of working in the sector. 'Long hours', 'labour intensive' and 'boring' were the most commonly used negative descriptors, while team focus, well paid, creative and exciting were the most common positive descriptors.

Again there are contrasting responses when demographic groups are examined in some detail. For example, those thinking of staying on at school beyond GCSE exams appear to have a more positive view of the sector. More think it is exciting (24.5% against 15.3%) and creative (24.7% against 16.5%) when compared to their peers looking to leave school post-GCSE. Similarly, private school students are more likely to describe the sector as exciting (30.9%) compared to state school students (18.2%) while, once again, a gender imbalance exists – a quarter of female students describe it as boring (25.6%) while only 18.3% of male students agree.

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



Awareness

The parallel challenge for the sector is students having a general lack of awareness. This manifests itself in a general lack of knowledge of many market players and the potential jobs available. The school system's patchy careers advice seems to be partly responsible for this.

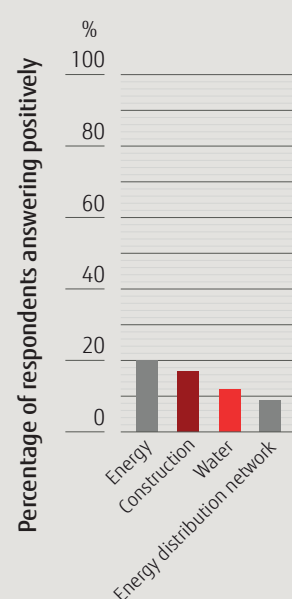
To take each in turn, when asked if they had heard of a number of large EUBE firms, students recognised some high-profile brand names on the list. Brands that bill their customers directly topped the list. Energy networks fared less well and engineering and construction firms were the least recognisable in our survey.

Later on, when asked whether they were aware of job opportunities and options in a range of sectors and companies, nearly half of all students (49.9%) said they weren't aware of any at all. This identifies a lack of awareness of all sectors, EUBE included. While one in five (20.2%) are aware of opportunities in energy companies, only around one in ten are aware of the possibilities of working for water companies (12.0%) and energy distribution firms (8.5%).

More worryingly perhaps is that there is an even greater lack of awareness in state schools, where only 16.6% were cognisant of the job opportunities in construction and 19.0% aware of those in electricity companies. By contrast, private school students showed greater awareness of the electricity company (29.8%) and construction company (26.6%) options.

An overall lack of awareness is perhaps partly a function of a failing careers advice process. When asked which kind of jobs school provides information about, teachers (45.6%) and engineers (38.2%) recorded relatively highly while energy and utilities awareness (17.5%) was low.

Are you aware of job opportunities/options available in these sectors?



The gender gap

Perceptions of EUBE as male-dominated industry sectors persist, sometimes borne out by the reality, other times not. And if the survey is a reliable guide – showing a clear gender discrepancy around expectation and attitudes – the gap will continue to exist.

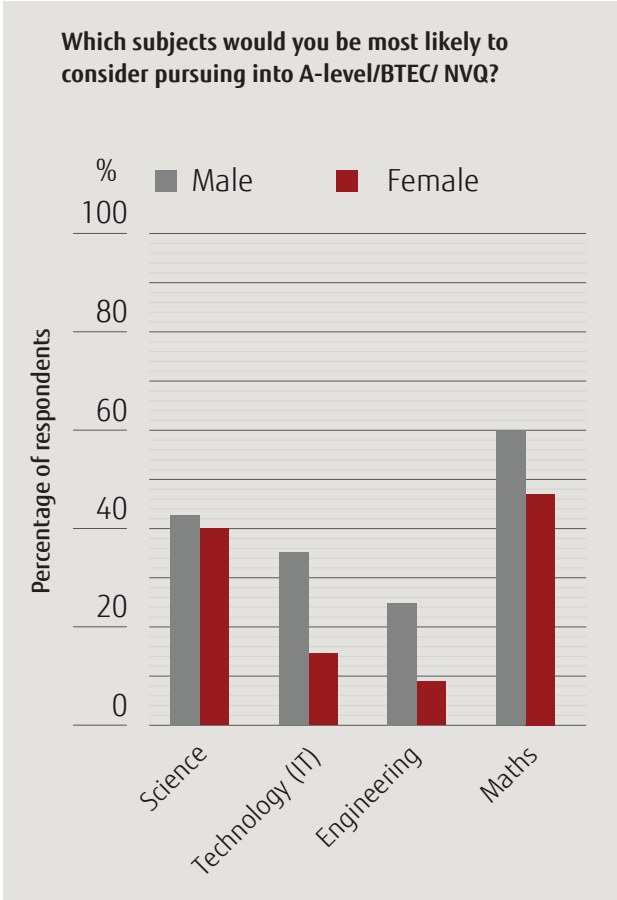
Consider, for example, that:

- A small percentage of girls (14%) are aware of job opportunities in construction companies compared to almost a quarter of boys (23%).
- Just 15% of girls think that the energy, utility, and built environment sectors are creative, compared to 25% of boys.
- Only 16% of girls can relate to the utility, construction and engineering sectors (compared to 23% of boys who see it as exciting).
- Boys are also more likely to think the sector is easy with 1 in 8 (12%) assuming this compared to 5% of girls.

The female response to the likely careers they will enter showed a lack of interest in EUBE sectors. While 15.8% are considering engineering this is dwarfed by the 28.9% of male students considering that career path. Further, when it comes to EUBE as a likely option, just 4.9% are actively considering it.

Meanwhile, the likelihood of a future gender imbalance within the sector is underscored when looking at the subjects students intend to study. When asked which subjects they would most likely consider pursuing into A-level, BTEC or NVQ level, male students are more likely to choose one or more STEM (science, technology, engineering and maths) subjects than their female counterparts. For example, 59.6% of male students are considering maths compared to 47.6% of female students. Meanwhile, a quarter of male students are likely to pursue engineering (26%) compared to less than one in ten (9%) of females. Only in science is the gap relatively small.

Without encouraging female students to adopt STEM subjects in greater numbers, the gender gap within the sector will persist and a looming skills gap will remain unbridged.



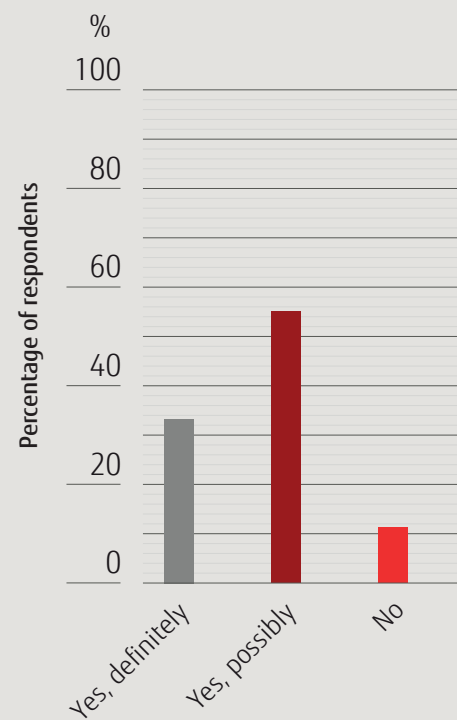
Innovation: what the next generation wants

Attracting a new generation of engineers and other workers to the sector means understanding their needs, aspirations and expectations. What, in other words, makes a desirable employer?

For the millennial generation – sometimes referred to as Generation Y – entering the jobs market, a flexible workplace and use of leading edge technologies has always been perceived as an important part of the package. And now the survey data bears out these assumptions. When asked whether they would be attracted to work in an industry if they knew it had state of the art technology, an overwhelming 88.7% said yes – either definitely or possibly.

Intriguingly, enthusiasm for the latest technology varied from region to region. In Scotland (49.1%) and the North East (47.5%) more students said state-of-the-art technology would definitely influence their decision. Equally, those likely to leave school after GCSEs rather than stay on, reacted positively to the opportunity – a combined 93% of this cohort would embrace an industry offering such technology.

Would you be attracted to work in an industry if you knew that it had state of the art technology?



The power of social networks

Peer recommendation and immediate role models are important factors in influencing the younger generation when considering career options. These 'social bubbles' play a powerful role and their absence can be telling.

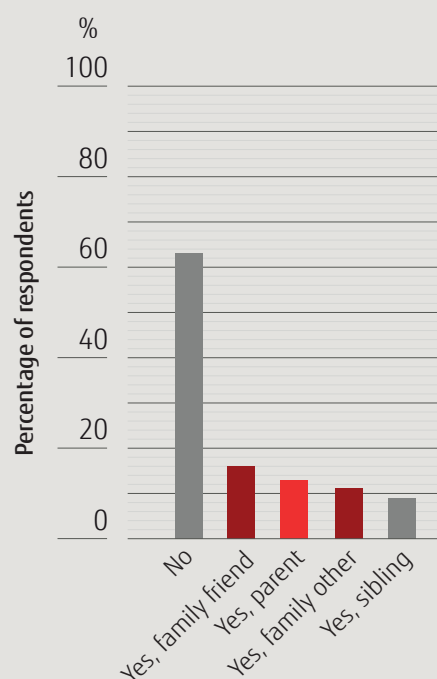
Consider, for example, that:

- 78% of students said they are more likely going to go into a career that someone in their social bubble are in.
- More than 1 in 5 (22%) said they are definitely going to go into a career that someone in their social bubble is in.
- Female students (81%) said they are more likely than boys, to go into the same career as someone in their social bubble.
- 36% said they assume they would enjoy a career if someone in their social bubble does.
- 35% said 'who you know' makes it easier to get a job.

If social bubbles matter then the fact that two thirds (63.1%) of students say they don't know anyone who works in EUBE should be a concern. For an industry looking to attract would-be employees across the social scale, it is notable that students at private schools (59.6%) are more likely to know someone in the industry sector than those at state schools (45.6%).

The industry needs to act in order to compensate for this lack of direct role models. Intriguingly, enthusiasm for the latest technology varied from region to region.

Do you know anyone who works in the energy, utility, and built environment sector?



Actionable advice

1. Build links

A cohort of students will enter the workforce within two years carrying a combination of misconceptions and fixed perceptions of EUBE sectors. Worse, many are oblivious to the opportunities the sector offers. Careers advice is lacking and for the majority there are no family or friends in the industry to act as role models.

Action

Raise the profile of your organisation – and by association, the sector as a whole – by getting into schools and on to social media. Build links at the critical times when students are considering career choices, GCSE, A-level and BTEC selection. Open the company up to school trips and get involved in University Technical College (UTC) open days. Show a sceptical future workforce why they should rethink these sectors through industry associations like the Institute of Engineering and Technology.

2. Embrace new technology

The millennial workforce is a digitally-native workforce. It expects the workplace experience to match the consumer experience. That means smart devices and Artificial Intelligence systems, connected through IoT to ensure anytime, anywhere access to applications, tools and data.

Action

Use new technologies to deliver better business efficiencies and drive effectiveness across your entire workforce – demonstrating to your would-be employees that you are a forward-thinking and innovative employer.

3. Help close the gender gap

It exists and it persists. Routinely, as the survey shows, female students are less likely to study the subjects that will lead to jobs in the sector. Meanwhile, they are less attracted to what they believe it has to offer. “Too male dominated” is how one respondent described the industry. Just a perception maybe, but one that could become a self-fulfilling prophecy, leading to a much smaller talent pool available to the sector.

Action

Demonstrate that this is an attractive sector for a female workforce. Showcase successful, senior female staff in your companies, offer mentoring services and give female students a taste of life in the sector through work experience, open days and partnering with associations like the Women’s Engineering Society.

4. Champion the post-GCSE leavers

This group is heading out into the real world soon and, for many, the energy, utilities and built environment sector is not on their radar. Their perceptions of the industry are generally more negative and their knowledge appreciatively lower when compared to those staying on beyond GCSEs.

Action

As part of your firm’s corporate social responsibility programme, introduce a fast-track scheme for post-GCSE leavers. Training, mentoring and on-the-job experience, turn this group into the directors of tomorrow.

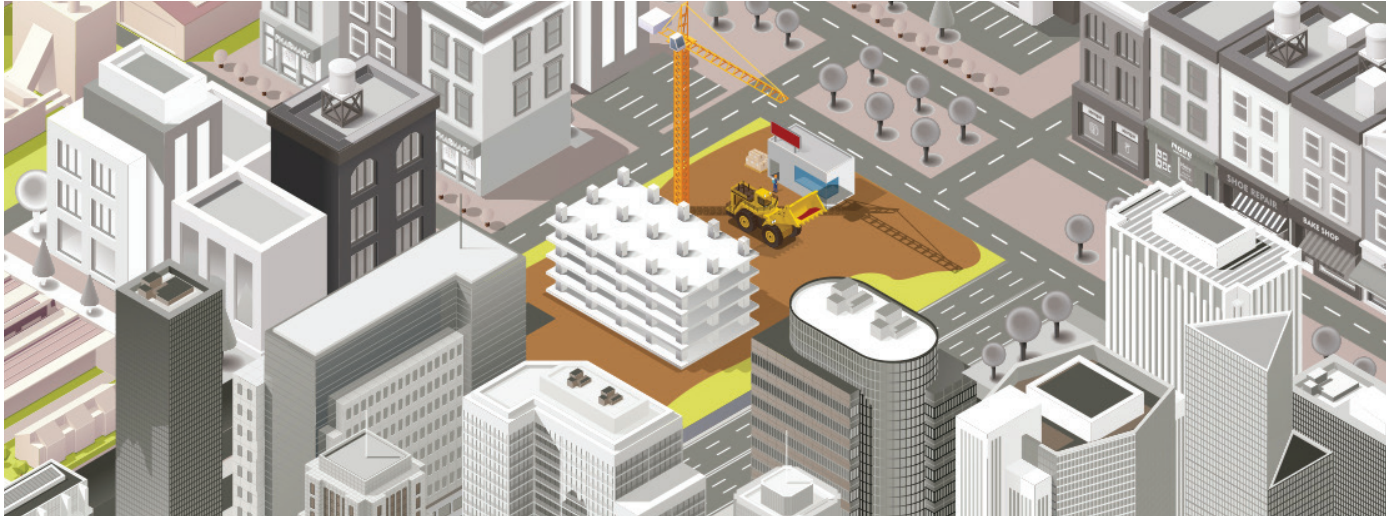
5. Create a social bubble

It is one of clearest findings of the survey – two thirds of students lack family or friends who work in EUBE. That means no role models, no ‘social bubble’. Without this, it is perhaps unsurprising that so many students lack an affinity with the sector.

Action

Make sure your firm becomes a role model for the workforce of tomorrow. Champion your brand, make your employees proud to work for the company and create a new ‘social bubble’ using social media as a tool.

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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