

KENT ADVANCED MANUFACTURING & ENGINEERING GUILD

Newsletter

November 2017 - Christmas Issue



Introduction — From our chairperson Phil Hart



Welcome to the Christmas edition of the KAMEG Newsletter.

Addressing the engineering skills gap is critical to the future of both the region and the UK, and the output from the Guild is so important in creating awareness of what career opportunities are out there, and how to access them.

It's great to see Chelsea's and Harry's stories and the success they have achieved through apprenticeships, well done to them both. Hopefully their stories will inspire other young people into looking at engineering based apprenticeships.

There's been some great activities over the months since the April's Newsletter.

The structure of the membership is now embedded, and the format of meetings and actions has now settled. As I have mentioned before, the Guild is all about being employer led, and to do this we need more support from employers in the Kent region. Both the Schools Engagement Sub-group and the Employer Engagement Sub-group really need more employer members as is this support that will ensure we continue with the great progress made so far. If you can give a little (more) of your time, you genuinely can help mold the skills agenda and activities in your region.

Addressing the engineering skills gap

Engineering accounts for 26% of all UK companies. It employs 5.7 million people and generates 26% of UK GDP. Engineering companies are projected to have 2.65 million job openings by 2024, 1.86 million of which will need engineering skills.

While there are some positive upward trends to report in the talent pipeline, the supply still falls significantly short of demand. The annual shortfall of engineers and technicians is projected to be at least 45,000 but up to 85,000, largely depending on the extent to which Brexit affects the recruitment of international students.

If we are to address the skills gap, we need to engage young people from all backgrounds, so they understand 21st century manufacturing and engineering. We need more of them to understand how what they learn at school is used in the real world. Giving them the chance to talk directly to engineers and engage in hands-on activities that showcase and contextualise engineering is at the heart of the engineering community's approach to inspiring the next generation.

Apprenticeship recruitment is picking up and 2015/16 saw a 5% growth in applicants to university engineering courses but it would be wrong to be complacent. The perception of engineering is improving, to capitalise on this more must be done to inspire young people and to stop girls dropping out of the talent pipeline at each decision point.

From strong employment prospects and competitive salaries to a varied career at the cutting edge of technological advances, engineering has a lot to offer. We owe it to the potential engineers of the future to give them every opportunity to understand that and encourage them to study the subjects that allow them to be part of that.

Through targeted employer outreach, regional and local events, an industry-funded programme of targeted interventions and high quality careers resources, Tomorrow's Engineers, aims to do just that. The Tomorrow's Engineers Network is led by a growing network of employers of all sizes working collaboratively, drawing on dedicated local expertise and developing strategic schools engagement activity that is changing perceptions and opening up the industry to young people from all backgrounds.

For more information on the Tomorrow's Engineers Network, please contact the SE Employer Support Manager:

Bronagh Liddicoat CEng, FICE e: bliddicoat@engineeringuk.com t: 01273 642023

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Chelsea—Former Apprentice

Chelsea successfully achieved her Advanced Maintenance Electrical/Electronic Apprenticeship at National Grid, Isle of Grain and has been progressing further and further! IPS caught up with Chelsea to see how her Apprenticeship has helped since achieving. Chelsea continued her employment with National Grid and has recently been promoted to a managerial role and encourages and supports other apprentices within the company.

Chelsea's Story



"I achieved my GCSE's and completed an AS level at 6th form when I decided an apprenticeship was the route I wanted to take, as I was now looking for a career. My parents had always recommended them to me by stating that you gain valuable skills in an apprenticeship and I didn't want to study for years and come away with no life skills. I liked the idea that with apprenticeships you are earning and learning and so, I started a business

apprenticeship. However, I realised early on that the environment was not for me and that I needed something more hands on. To be honest I wasn't sure what I wanted to do but I had always had an interest in Engineering and so that's why the vacancy for an apprenticeship at National Grid jumped out at me."

Chelsea was already registered to be an apprentice, so started to search the GOV website: www.findapprenticeship.service.gov.uk to see what was available and the National Grid Engineering Apprenticeship had been posted.

"When I saw the engineering apprenticeship, I researched the company and my interest increased at the assessment day, I really enjoyed it and I knew this was the career I wanted."

"I enjoyed my apprenticeship, it was difficult, but 100% worth it. The first year was a full year at the IPS apprentice training centre in Rochester, followed by a 2nd Year that was split between me being based between the National Grid and the IPS apprentice training centre in Rochester. It was good, as my workplace recognised and was accommodating to the studying and IPS coursework that I needed to do and were on board with my needs to arrange any additional meetings with my trainer to help me through."

Since achieving her apprenticeship, Chelsea has gone on to complete a Higher National Certificate in Electrical Engineering and spent 3 years in the Technician role which her apprenticeship was training her for where she has since gained even more knowledge and skills within. Recently the role of Control & Instrumentation Assistant Engineer became available at National Grid. Chelsea wanted to continue with her progression and after speaking to her boss, applied for the job and was successful in her application.

"Apprenticeships are a great way to learn while working and I really do recommend them. They give you real life skills while achieving the qualification you set out to do and are a great foundation for a career. The knowledge and skills that are obtained can be used anywhere and the most important thing for me was that I knew what I was doing in my job while doing it and getting onsite experience and knowledge. This gave me good real life examples to put into my studies. "

IPS would like to congratulate Chelsea; after completing her Advanced Maintenance electrical/electronic Apprenticeship, and working in full-time employment, Chelsea has recently progressed to a managerial role and we wish her every success in the future!

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Institution of Mechanical Engineers



Institution of Mechanical Engineers Scholarships and Awards

The IMechE awards committee gives to members, students and other groups about £700,000 per year. As a member of the awarding committee I've noticed that we hardly have any applications from Kent. I've spoken to a number of colleagues in the universities and colleges in and around Kent to try to change this situation – I hope that this little article might reach other people. There are a number of different awards, Apprentice of the Year attracts a prize of about £1,500 and individual grants up to about £2,000 are available to attend conferences – members often use this to go to conferences in the USA and Australia. Its also possible to get your entire university fees paid. For these awards you need to be a member; but don't let that put you off – membership is free to students.

There are also grants available for schools and colleges that run after school clubs of an Engineering or Scientific nature. No need for membership; but you do need a Chartered Engineer to sign the form – I'll happily do that for appropriate applications. This can be used to buy equipment and consumable materials – say a 3D Printer, or sheets of steel, or plastic as examples. It can also be used for school visits to shows, competitions, or other events. Recently we support part of the cost for a Technology Class to go to Saudi Arabia – they came in fifth in a world engineering competition. This link takes you to the web page:

<https://www.imeche.org/careers-education/scholarships-and-awards>

I can be contacted: Andrew Livesey MA CEng MIMechE

Director – Andrew Livesey Consulting LTD

Andrew@Livesey.US – please mention the Kent Engineering Guild in the subject box

Leigh UTC to Mercedes F1



Student Harry Dressel successfully completing his Technical Baccalaureate at The Leigh UTC (Dartford). This included gaining qualifications with a BTEC Engineering Extended Diploma, Core Maths and EPQ all at Level 3.

Whilst at The Leigh UTC, Harry has been keen to demonstrate his skills by designing and building an electric car for the 'Greenpower' series. Fabricating the vehicle shell from carbon fibre, including a bespoke steering system and drive train, this has enabled him to develop specialised engineering skills. This has not gone unnoticed.

Harry applied for a prestigious higher apprenticeship with F1 giants, Mercedes. With over 6000 applications. He underwent a series of rigorous interviews and tests. Mercedes were so impressed by Harry, that they made him an offer to be their apprentice for 2017, working in the engine and drive-train sector at their base in Brackley.

Chair of Governors, Keith Ellis, Kenard Engineering with Harry Dressel

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ICE to hold Interactive EngineeringFest at Diggerland



On 31 May 2018, the Institution of Civil Engineers (ICE) will be hosting EngineeringFest – an interactive STEM event at Diggerland. Located in Kent, the construction based theme park offers a relevant and interactive setting in which to engage children and their families in a fun day out, learning about engineering.

Supported by Stem Learning UK and Engineering UK, EngineeringFest aims to engage year 5-8 students, with a series of interactive STEM related activities. Organisations from across the Industry have the opportunity to participate as an activity provider and engage directly

with the community, local schools and schools students as well as other STEM providers.

"EngineeringFest will be a celebration of engineering in South East England. We want to inspire the next generation into the industry, to increase the understanding of the value of civil engineering in the broader community. We are excited to collaborate with local organisations and the wider industry to showcase what engineering has to offer" said Suzanne Moroney, Director - ICE South East England region.

EngineeringFest is being held as part of the Institution of Civil Engineers' 200 anniversary celebrations which will be a yearlong of public events starting in January 2018- to educate the public about the contribution civil engineers make to our daily lives, and inspire the next generation into the industry.

If you and your organisation are interested in participating and supporting the event, please contact jemma.ralphs@ice.org.uk for more information.