

STEM Engagement Network meeting

Date: 11/July/2018



Item	Discussion Points	Action
Introductions	<p>Welcome, from Carol Davenport (NUSTEM)</p> <p>Apologies received from:</p> <ul style="list-style-type: none">• Claire Yakoob, Resourcing Manager, Northern Powergrid• Pete Edwards, Durham University• Stuart Proctor, Cummins• Caroline Turner, Penshawview• Elin Roberts, Centre for Life• Jo Edwards, Virgin Money• Lucy Tetley, GET North <p>Present:</p> <ul style="list-style-type: none">• Kirsty Hayward, Success4All (Newcastle educational charity)• Jen Lee, RTC North / STEM Ambassadors• Moira Shaftoe, Engineering UK• Carol Davenport, NUSTEM, Northumbria University• Lisa Carson, senior HR officer, Komatsu• Jonathan Sanderson, NUSTEM, Northumbria University• Karen Marshall, Accenture	
Rationale & Terms of reference	<p>Updated document circulated.</p> <p>Jonathan to circulate updated version to wider group / via website.</p>	<i>Jonathan</i>

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<p>Representation</p>	<ul style="list-style-type: none"> • Elaine Roy has moved on from British Engines. • Other contacts and approaches have been made – newcomers to this meeting welcomed. • Not clear if reduced representation this meeting due to wayward emails, emails reaching the wrong people, or a combination. • Kirsty reports that council digital groups have met in a similar manner to this group, fairly recently. • Moira suggests Ian Green may be an appropriate Nissan contact. <p>NUSTEM team to follow up on group membership</p>	<p><i>Jonathan/Carol</i></p>
<p>Status Updates</p>	<p>Moira Shaftoe, Engineering UK Bring It On: 3-4th October, Sunderland. Change of venue to Beacon of Light. 156 schools, 40 companies. No colleges or training providers – framing is about ‘inspiring.’ Big Bang competition zone new this year. Tomorrow’s Engineers careers resources planned. Challenging for 2019: growing the event will require a(nother) new venue. Sustainability: raising funding from more diverse group. Still free to attend.</p> <p>Great North Engineering Exhibition at Mining Institute: engineering activities for young people, weekend lecture programme, rolling exhibit: 3 mains areas in exhibition (connecting communities, energy... another one). 7,500 attended in 2½ weeks.</p> <p>Meet the Engineer at Centre for Life, 10th November. Aiming for bigger event than last year; looking for more company involvement.</p> <p>Engineering UK mapping tool: ongoing, but updating system to accommodate changes in school status. Reviewing dissemination approaches.</p>	

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State of Engineering 2018 report is out, via website :
<https://www.engineeringuk.com/research/engineeringuk-report/> (registration required; 300 page document!). NUSTEM is one of the case studies in the report (pg 80). Today published quarterly briefing report on gender disparity in engineering.

Jen Lee, RTC North

Running mentoring programme: 400 young people in 2017-18, from about 35 schools. Running on smaller scale (250-300) for 2018-19. 15 sessions (from each school) over 30 weeks. Schools cover whole region. Company support very welcome; significant time commitment, but rewarding and valuable.

NE Ambition project (via LEP): waiting to hear, imminently. Working with SMEs, connecting to primary schools. Start September. <https://www.nelep.co.uk/skills/north-east-ambition/>

Lisa Carson, Komatsu

Working with Bring It On, etc. Trying to involve graduate engineers, focus on primary schools – for which organisation tricky (have people keen to get involved, but can't turn around involvement in a fortnight, which many schools want). ~120 applications for ~9 apprenticeship posts (2 women last year!).

Discussion here about apprentices, capabilities on leaving school, confidence and ability/resilience in test situations.

Work experience weeks: can offer many, but not many in the same week... which is what everyone wants.

Discussion here about lack of coordination, but unclear whose problem that is. Lisa reports more gap year/summer placement experience. Challenges include:

- *Paperwork overhead for schools, and/or cost of outsourcing that.*
- *Ability of schools to cope with flexible / non-simultaneous work experience.*
- *Onus on student to find placement (& resulting widening of advantage gaps).*
- *Students not always being interested in placement they're thrown into.*
- *Looked on favourably by OFSTED, but not a statutory requirement.*

Karen Marshall, Accenture

Doing GET North stuff.

Some schools: Parent & Child careers safari (North Tyneside).

Using positive action through apprentice recruitment to improve gender balance, and looking at women who are changing career. Intention is that knock-on/culture change effect will lead to multiplier effect.

Challenges:

- money (no budget to sponsor anything; situation shared with other regional businesses in the sector).
- aware that digital displacement is real. May end up with apprenticeships targeting older demographic.

Interested in attrition; skills void in £25-£35k/year jobs. Often postgrads or overseas workers, but visas now challenging. Retention rates (especially for 4-year apprenticeships) is affected by competition from other employers.

Degree apprentices sometimes struggle with university systems/approaches: want more flexibility (because they have 'work' work to interleave, but for example still need to check in with university for attendance criteria). But seeing more high-tariff students applying; standard rising continuously.

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<p>Research update: Enterprising Science</p>	<p>Carol reported on KCL ASPIRES group's latest publications: research continuation of science capital ideas, leading to Science Capital Teaching Approach. Slides attached, and see:</p> <ul style="list-style-type: none"> • http://www.ucl.ac.uk/ioe/departments-centres/departments/education-practice-and-society/science-capital-research/science-capital-teaching-approach-pack <p>To some extent, the proposed 'science capital teaching approach' parallels attitudes and approaches from primary teaching. So it's not necessarily groundbreaking, but is perhaps useful for refocusing efforts. NUSTEM doesn't disagree with any of the recommendations; they support or would be supported by our own experience and research.</p>	
<p>NUSTEM Careers resources</p>	<p>Scientist / STEM Person of the Week</p> <ul style="list-style-type: none"> • Has a research component too - early results extremely encouraging. <p>Secondary Careers work</p> <ul style="list-style-type: none"> • funded by NECOP • https://nustem.uk/careers • Teacher CPD, around careers in the curriculum: Gatsby-linked material. We're keen to recruit schools for this, and have funding to support! <p>Worksheets to contextualise subject topics: drill knowledge, explore understanding, extend applications, all in context of a company (typically based in the region). Will be looking for more company examples once the current NECOP funding is complete.</p>	<p><i>Carol to talk with Karen about including Accenture</i></p>
<p>Other business</p>	<p>NUSTEM event calendar submission form is live: https://nustem.uk/events/community/add¹, albeit with a little work needed. Submissions welcome.</p>	

¹ I'll probably amend that URL in the near future, to something simpler: <https://nustem.uk/events/add> — Jonathan.

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	Jen demonstrated new RTC North website (http://stem.rtcnorth.co.uk); send information to her for inclusion.	
Next steps, dates	Next meeting: Moira to discuss repositioning of Tomorrow's Engineers.	