

Inspiring Change Conference & Awards





Inspiring Change -Chi Onwurah MP





Change for Growth

- Keith Waller, Infrastructure & Projects Authority, HM Treasury
- Catherine De Marco, Deputy Director Infrastructure Skills, Department for Transport
- Kate Hall, Design Director, HS2





How to achieve FIR in the workplace...

Inspiring Change Conference, 23 May 2018 Kate Hall, Design Director HS2 Ltd.





Background

- WISE course 1991
- Sponsored Student
- Civil & Structural Eng. Degree
- Joined Arup 1995
- Infrastructure Board Member 2009
- Joined HS2 2015













"Sexism is not a glass ceiling. It's a labyrinth of micro-inequities that add up over a lifetime"

AMY CUDDY

Professor at Harvard Business School

Micro-affirmation = small, subtle acknowledgments and acts that reinforces a person's value and accomplishments Engineering has taken me around the globe



Evidence and impact over inputs...



EDI & SEE – The difference maker!



The difference between winning a contract and coming second place can be as little as

THE SHAPE OF THINGS TO COME:

HS2 EDI

https://www.youtube.com/watch?v=I2Mr5gJ6b3I

ROOTS ALONG THE ROUTE:

Impact of HS2 Inclusive Procurement approach on SME's https://www.youtube.com/watch?v=ICOs_z8gbGA&t=7s

Major HS2 contracts are beating industry benchmarks for diversity and representation



disability

EMPLOYER









HS2's suppliers will award thousands of contracts to small businesses and hire thousands of people

Blind auditioning

Inclusive Design



People want an experience that is <u>tailored to their</u> <u>individual needs</u>. That means HS2 services should provide <u>flexibility and choice to suit everyone</u>. The design of our services should be <u>consistent and</u> <u>simple</u>, providing an <u>easy and enjoyable</u> <u>experience for all</u> who use them...







Fairness, Inclusion and Respect in construction



Inspiring Change -Lord Blunkett





Inspiring Change in the Community





Winners of the Inspiring Change in the Community Award:

Mears Group



#InspiringChange







Inspiring Change in Education





Winners of the Inspiring Change in Education Award:

#InspiringChange





NORTHERN LINE EXTENSION



Inspiring Change in the Workplace





Winners of the Inspiring Change in the Workplace Award:

Morgan Sindall

#InspiringChange



MORGAN SINDALL



Inspiring Change SME Award





Winners of the Inspiring Change SME Award:

DXI Regeneration Ltd

#InspiringChange







Inspiring Change Project Award





Winners of the Inspiring Change Project Award:

GRAHAM Construction

GRAHAM

#InspiringChange





FIR Inspiration Award





Winners of the Inspiring Change FIR Inspiration Award:

Ricky Prett

#InspiringChange







Inspiring Change -Sarah Beale, CEO, Construction Industry Training Board





Game Changers - inspiring the next generation

- Nike Folayan, Chair, Association for Black & Minority Engineers
- Geoffrey Fowler, Principal, London Design & Engineering UTC
- Susan Scurlock, Primary Engineer



Inspiring the Next Generation Nike Folayan (PhD, CEng. MIET) Chairperson, AFBE-UK

Who we are

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Why we exist



A Sense of Belonging in Engineering

The Genesis

- Formed in 2007
- 5 members

Our Aims







How we achieve our objectives 40 of 26



Questions for Today

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E-UK

- Who are the next generation?
- What would the UK's working population look like in the next 20-30 years
- How do we inspire the next generation

Generations

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Reference: http://www.executivevoice.co.uk/communicating-different-generations/



UK non-white minority could double by 2050



The UK in 2051 will be a more diverse society than in 2001 and this diversity will have spread to many more part of the country beyond the big cities where ethnic minorities are concentrated today.

The UK Office of National Statistics says...



What does industry's diversity look like today? 44 of 26

Percentage of female engineers in the	
labour market	11.0%
Female engineering & science technicians	27%
STEM female graduates working in STEM	
roles	51% (male at 68%)
Percentage of BME engineering	
graduates	25%
BME Engineers	6.0%
 1.WISE analysis of Labour Force Survey, 2.Engineering UK 2017 Report 3.Royal Academy of Engineering 	
	🐹 AFBE-U

Engineering Lifecycle



How do we enable a more inclusive engineering workforce?

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- ✓ Create opportunities.
- Actively engage and inform.
- Create continued and sustained avenues.

- Positive discrimination.
- Removal of meritocracy.
- Strictly quota systems.

🗵 Box ticking

- Attract, recruit and develop.
- Enable progression

🍪 AFBE-UK

How do we inspire



A Sense of Belonging in Engineering



Making Engineering Hot







Attract





Case study

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FBE-UK

DfT Transport Infrastructure Strategy

Case study

AFBE-UK's Making Engineering Hot Campaign

AFBE-UK is a not-for-profit organisation which aims to bring together Engineers from BAME backgrounds in the UK. The Making Engineering Hot Campaign (MEH), founded in 2009, is a UK wide programme. Its primary purpose is to introduce young people of school and college age to careers in engineering. The programme's success relies on building close working relationships with teaching staff to understand the needs of their students, use of role models and project focused activities. Of the 1200+ young people reached, 87% would consider engineering careers.

In 2010 Fauzia Amao, age 17, participated with her mother in a MEH workshop titled 'Contributions by African People to the Development of Science and Technology', at Croydon Supplementary Education Project. Fauzia said:

"At the time, engineering was relatively new to me so it was enlightening to hear how some ancient peoples used the same fundamental principles to build the world's earliest civilisations. The event was a great opportunity to network with engineering professionals and like-minded young people. They offered me careers advice and guidance on universities and gaining work experience. An engineer I spoke to at the event later introduced me to a consulting civil engineer and we went on to establish a mentoring relationship."

Fauzia is now in the final year of her MEng in Civil and Structural Engineering at the University of Leeds and has been offered a graduate job at Atkins. She is also a STEM ambassador.



Department for Transport

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Transport Infrastructure Skills Strategy: building sustainable skills Moving Britain Ahead

Inspiring the Next Generation 510f 26





In Summary

- \rightarrow Start Early!
- \rightarrow Ways to inspire Generation Z
 - → Schools, Family and Teachers Awareness Outreach
 - → We need a more welcoming industry: The missing ingredient of a successful transition is often not necessarily vast amounts of work experience, but rather having sufficient access to industry's most valuable resource the people".
 - → Visible Role Models and Mentoring at all levels
- → Diverse teams have increased productivity and creativity: "Companies in the top quartile for ethnic diversity are 35% percent more likely to have financial returns above their respective national industry medians." McKinsey Report, Why Diversity Matters 2015.



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Thank you

ENGINEERING HOT

HACKNEY | SOUTHWARK | NEWHAM << AGES 12 - 18 >> FEBRUARY 2018 - JULY 2018



twitter.com/AFBE_UK



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AFBE-UK

Contact Us www.afbe.org.uk info@afbe.org.uk



DO YOU HAVE WHAT IT TAKES TO MENTOR A FUTURE ENGINEER?

TASK Sessional Volunteers and Mentors Available Twice a Month Advise/Mentor up to 3 Pupils

BENEFITS

Extend Professional Network Continous Professional Development Credit Inspire the Future Generation of Engineers

 Market Structure
 meh@afbe.org.uk

 www.afbe.org.uk
 www.afbe.org.uk

 INSPIRING FUTURE ENGINEERS IN SCHOOLS AND COLLEGES
 SPONSO



Inspiring the Next generation

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AFBE-UK



Network of over **6000** individuals of **BME origin** across the UK from various engineering industries.

Chevron Inspire Future Engineers through NextGen

Chevron is aiming to inspire the next generation of engineers through its support for the NextGen programme, run by \square° AFBE-UK Scotland, an Aberdeen-based not-for-profit organisation, in conjunction with Aberdeen City Council, to promote engineering as a career choice among young people.

The organisation's first NextGen event of 2016 recently welcomed around 50 people, aged between 9 and 10, to an event held at Kaimhill Primary School in Aberdeen.



Engaged and partnered with over **30** employers and institutions in our programmes.



Making Engineering Hot and NextGen!

In 40 schools reaching over 2000 young people.

90% would consider engineering after participating ing



Transition/Real projects

750 University engineering students in Aberdeen and

London. 97% of Transition

participants found the programme vital in building confidence and understanding of what becoming an engineer entails. Over

70% with job offers within 12

months!

References

- 1. Engineering UK 2017 report
- 2. <u>http://www.wes.org.uk/content/useful-statistics</u>
- 3. How underrepresented Minority Engineering students derive a sense of belonging from engineering
- 4. Cook, A., 2015. Increasing diversity and inclusion in engineering survey report—a case study toolkit, Royal Academy of Engineering Diversity Leadership Group Report. London, UK).
- 5. CaŚE, 2014. Improving diversity in STEM, Ref No: B37380. Campaign for Science and Engineering, London, UK.
- 6. Folayan, O., Enegela, P., Bankole, Y., Colombo, I. and Folayan, N., 2015. Transition: Influence of role models on the progression from student life to the world of work, Proceedings of the Educating Enterprising Engineers and Scientists seminar, London, UK. 17 June 2015
- 7. Creating cultures where all engineers thrive A unique study of inclusion across UK engineering By the Royal Academy of Engineering
- 8. Changes in market requirements or technology (Docherty, D., and Fernandez R, 2014).

How diverse is UK's STEM workforce (1)_{570f 26}

How diverse is UK's STEM workforce (2)_{580f 26}

Engineering Lifecycle

An Industry led school...

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- School Performance tables
- OFSTED ٠
- New Grading •
- Out of date curriculum •
- **Disaffected students**
- Parents •

Consistency across the empire

Your future workforce

London Design & **Engineering** UTC

- Industry Led
- Opened in 2016 / Over subscribed every year
- 89% BAME
- 46% girls in year 11 /37% whole school
- 4 types of education
 - School
 - Apprenticeships (Non Levy & Levy)
 - Adult learning
 - Industry skills
- Business like ethos / career focused
- Delivering work ready students

An Industry led school...

Primary Engineer Programmes

... the first step

Game Changers Inspiring the next generation

Primary Engineer Programmes

... the first step

Vision: To ensure all children and pupils achieve their full potential through the skills related to engineering

UNIVERSE OF ENGINEERING















Primary Engineer LEADERS AWARD Secondary Engineer LEADERS AWARD







Primary Engineer LEADERS AWARD Secondary Engineer LEADERS AWARD



Primary Engineer LEADERS AWARD Secondary Engineer LEADERS AWARD

Just crank the handle for a dry place to sit!

Which rotates e layer of wood)

nailed on to metal inside holes covered with puty/wood tich wood corowr)









Primary Engineer LEADERS AWARD Secondary Engineer

LEADERS AWARD













The Universe of Engineering











Dr Susan Scurlock FIES FRSA CEO and Founder Susan.scurlock@primaryengineer.com



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Game Changers - inspiring the next generation

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Step Change - broadening the talent pipeline

- Kath Moore, MD, Women into Construction
- Kusai Rahal, Young Leaders Driving Change
- Sietske van de Ploeg, Mayor's Fund for London



Women Into Construction Changing the face of Construction

Women into Construction (WiC)

- Independent not for profit organisation
- Works with contractors and clients
- Develops positive action programmes to promote opportunities for women in the construction industry in London and Birmingham.



Construction and Infrastructure Opportunities

- 1.7 million homes to be built by 2025
- 27 Billion per year spent on domestic repair
- £61 Billion investment in transport and infrastructure
- 30,000 new apprenticeships in infrastructure and transport over next 5 years, with a target of 20% women



Opportunities for women

Employers need

• A skilled and experienced workforce able to adapt to the demands of site work.

Trained women entering the **Construction Industry need**

- An opportunity to gain valuable site experience, and apply their skills learnt in college or university, on site.
- Access to paid positions.More than 50% of women who train in construction, have difficulty finding employment in this area.



Support for women

- Advice and guidance
- Construction related training
 - Site Safety Plus training and test
 - CITB H&S training and test
 - Working at heights (IPAF and MEWPS)
 - First Aid at Work
 - Health and Safety for managers (SMSTS)
 - Confidence building/interview skills/CV writing
- Brokerage into supported work-placements
- Brokerage into paid positions



Work Placements

Work placements - practicalities

Work-placements are flexible.

The standard model is either 16 hours a week for up to 13 weeks, or 6 weeks full-time.

Placements are unpaid, however Women into Construction pays expenses (lunches, travel and childcare)

They are open to graduates, undergraduates and women in the manual trades.



Contractor Engagement

- Connecting contractors with skilled women
- Supported work-placements and job brokerage.
- Promoting inclusive work places
- Help with meeting CSR targets and addressing skills gaps.
- Recognising their engagement



Client Partnerships

 Crossrail- increased the numbers of women in workplacements, trainee positions and jobs on Crossrail sites.



 WIC is now working with Tideway to increase gender diversity within the programme. Tideway has an aspirational target of 50% women.





Outcomes

FARRINGDON STATION

Women into Construction has trained over 1,200 women and supported more than 700 of these into paid employment

FARRINGDON STATIC

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Michelle Umagho-Ukueku

- Michelle previously worked in housing and came to WIC, wishing to make a career change after being made redundant.
- She was interested in Health and Safety and WiC supported her through the NEBOSH qualification.
- She completed 2 workplacements with us, with Crossrail and BBMV.
- She applied for, and gained a paid position with Skanska as a Health and Safety officer
- 'Words cannot describe how happy I am'



Narges Afshari

- Narges is a refugee from Iran, with a Bsc and Msc in geology, and 6 years experience of analysing rock formations.
- When she came to WiC, she was working as a shop assistant and was desperate to find a position that would use her skills.
- WIC helped her gain her CSCS card and found her an apprenticeship on site, examining the ground conditions surrounding the Crossrail tunnels.
- She proved her worth on site, completed her apprenticeship, and is now developing her career as a ground settlement engineer.



Annika, Ray and Rachel

Shuttering Carpenters

- WiC helped these women individually with their initial training and first site opportunities.
- They are now working together on a huge regeneration project in South East London, building the shuttering for new-build housing - and loving it!



Kath.moore@women-into-construction.org women-into-construction.org

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Step Change - broadening the talent pipeline

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- Kusai Rahal, Young Leaders Driving Change
- Sietske van de Ploeg, Mayor's Fund for London



THE MAYOR'S FUND FOR LONDON

THE BUSINESS OF DIVERSITY





HELPING YOUNG LONDONERS GROW

MAYOR'S FUND FOR LONDON

MISSION:

We empower young Londoners from disadvantaged backgrounds to acquire the skills and opportunities they need to secure employment, climb the career ladder and escape the threat of poverty.



I. MORETHAN JUST FOOD MORETHAN JUST SCHOOL MORETHAN JUST A JOB



KEY PROGRAMMES & IMPACT -2017



PROJECT	FOCUS	ACTIVITIES	2017 REACH
Access Aspiration	Aspiration building Secondary Schools Employer engagement	 Work place visits Speed networking Employer presentations 	 24 schools 1,560 young people 374 insights
Enterprise Advisors	Careers guidance Secondary schools Employer engagement	 Careers guidance strategies Corporate volunteering 	48 schools2,000 Young people
Young London Working	Moving into work 18-24 yrs of age Employer engagement	 Job brokerage Employability training 1 to 1 support 	 1,075 young people 170 employers



OUR APPROACH

KEY PRINCIPLES



Deliver better social outcomes for young Londoners from disadvantaged backgrounds



Contribute to a more sustainable infrastructure for delivery



Cross-sector partnerships for more integrated, smart solutions



Pan-London



DIVERSITY: ISSUES

London is a wealthy, vibrant city offering some of the best opportunities in the world. But these are not open to all.



- London has the THIRD highest unemployment rate for 16–24 year olds in England.
- They are 22% more likely to be in INSECURE employment
- BAME young people are TWICE as likely to be unemployed and go on to live in poverty

YET

- Almost ONE in FOUR jobs across London are not filled with the right skills
- Construction: Over 80% of employers report skills shortages as a CHRONIC problem; 59% of construction firms believe that the sector's workforce will not have the required skills to cater for the industry's FUTURE needs and developments

London needs a better system to bridge the gap between young people reaching their potential and companies achieving their growth ambitions



DIVERSITY: OPERATIONAL SOLUTIONS



WORK PLACEMENT SCHEME



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Utilising each other's strengths; fast

Mayor's Fund employs young people

First month of travel costs paid

Employment outcomes & SROI

Young people integral part of business

 WHAT: Partnership between MFL and NR Three-month work placements 80% secured perma 46% employed with 	e from BAME ended nent employment Network Rail
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INGREDIENTS FOR SUCCESS:

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- Simple
- Low risk
- Empowering
- Supportive
- Viable

 \bigstar

RECOGNISED: NOMINATED FOR 2017 UKRI AWARD



DIVERSITY: STRATEGIC SOLUTIONS





• Breaking barriers for BAME YL in building sustainable careers

• Alliance of industry employers, acting as agents of change

SIGNATORIES:

VISION

AIM

ASLEF, Network Rail, Great Western Railway, Transport for London, MTR Crossrail, Rail Delivery Group, Sustrans, Women in Transport, Steer Davies Gleave, McGinley Support Services, TXM Group, Skanska, Vercida, AFBE, Transport Planning Society, Sustrans, Engie, Arriva Rail, Stagecoach

WEARE INVITING YOU

- I. Operational partnerships: e.g. work placement scheme, schools programme
- 2. Strategic partnerships: e.g. leadership events
- 3. Speaking events: e.g. CECA Conference
- 4. Social media campaigns

JOIN US!


GET IN TOUCH

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