

**The Innovation and Skills Recovery- Join the UKRC at the Fringe: Paul Jackson  
Speech (10 Minutes)**

**Check for delivery**

**Suggested Subject (From UKRC):**

- Our commitment to best practice on gender equality and diversity issues.
- The importance of Professional Bodies leading the way in promoting gender equality and diversity issues.

**Messages:**

- Women are one of the country's most under-utilised resources from a STEM perspective with too many dropping out of STEM education post 16 and too few pursuing careers in the sector.
- In addition to technical skills, women can bring new insights and innovations to technologies.
- The professional engineering community understands the importance of these issues and is actively working to encourage more women into the profession.

**Key points:**

- Congratulate Gillian Arnold for her impressive and inspiring speech and commend Nancy Platts for identifying the key policy issues.
- I think I speak for many here when I say that we would like to see not just more women in engineering but also more women in politics.
- Thank Annette Williams for her introduction and for the excellent work that the UKRC are doing in the field.
- Only 3% of registered engineers are female and although numbers are increasing they are not going up anything like fast enough.
- At the current rate of increase it will take a staggering 278 years for the gender balance to become equal.
- In 2007 there were just 517 new female registered engineers out of 5,300 registrants.
- Women make up only 15% of the UK student population in Engineering and Technology in Higher Education.
- Bad though this is, the situation is even worse when it comes to Further Education and Apprenticeships.
- 10% of Further Education starts that contribute towards success rates in the Engineering, Manufacture and Technology Sector Subject Area (2007/08)

- Only 2.6% of those in Engineering apprenticeship frameworks in 2006-7 were female and even these were likely to be less well paid than their male equivalents.
- And the numbers fail to tell the whole story. At our event last week Dame Wendy Hall who worked on the creation of the web highlighted the problem that since technologies are almost always designed by men alone, they are designed from a male mindset and fail to take into account women's perspectives and fail to benefit from their insights into what half of the world's population wants.
- We recently asked a number of celebrities what piece of technology they wishes "If only that existed." Amongst the responses one from Anneka Rice was that: If only watches could be fitted with a personalised chip, which would enable the watch, on a simple swipe, to act as an oyster card, credit card and front door key. The handbag would be a thing of the past!
- Somehow I doubt this would have been something that a male engineer would have seen straight away!
- Consider for a moment the huge potential of an engineering industry which was able to better understand half the world's consumers when no one else was doing it right!
- As a representative of the professional engineering community I recognise both the scale of the task we face and the passion with which it is being addressed by groups such as the UKRC.
- Our own organisation Women Into Science Engineering and Construction (WISE) works closely with the UKRC to this end.
- The professional engineering community are working together to tackle this problem:
- With only 9% of women considering themselves informed about engineering there is clearly a strong imperative for us to provide opportunities to gain "hands on" experiences and interactions from a young age.
- A real breakthrough in achieving this was The Big Bang 2009, the UK's first young scientists and engineers fair, which attracted nearly 5,000 boys and girls in equal numbers from across the country.
- 94% of attendees said that they enjoyed their visit "a lot" or "very much" whilst 80% said they had learned something useful about STEM careers and 78% said they had a more positive view of engineering.
- We are working with our partners to make The Big Bang 2010 in Manchester even bigger and better.
- We also aim to make it a year-long focus for young people, rather than a one-off hit and are building successful regional fairs throughout the country at which young people have an opportunity to showcase their own work.

- We are working with our partners throughout the country to provide exciting enrichment activities for all age groups.
- We are working with many young female role models to allow young women to see that engineering can be about them and can be an exciting and rewarding career which is well within their grasp. We are actively encouraging young women to sign up as role models on [www.scenta.co.uk](http://www.scenta.co.uk) to go out to schools and spread the word.
- In this way we hope to change the misconceptions that many women have of engineering as a dirty profession found in building sites and boiler rooms when more and more are in fact working on miniaturisation and missions to Mars.
- This last point was an allusion to Hanna Sykulska-Lawrence of Imperial College London who is speaking at our own event on Wednesday 1pm in the Chartwell Room at the Hilton- “Picking winners: can engineering succeed where finance failed?”
- Make no mistake about it- women are an important part of the future of engineering.
- The engineering community are committed to working together harder, smarter and more closely to achieve this.
- Thank you.

#### Further Stats for Q&A Session

- There is a very high percentage of women that actually study STEM who don't then go on to work in this area (73%) and a high percentage of women returning to work after children that don't go back to their STEM jobs. Research suggests this may be because of what women perceive to be unappealing corporate cultural values i.e. they know what it's like and this isn't compatible with bringing up a family. (So there is a retention problem as well as an attraction problem in the first place.
- Some positive news- this year's A Level results saw:  
14% rise in female Maths entrants  
19% rise in female Further Maths entrants  
6% rise in female Physics entrants

## Policy points for Q&A Session

- More targeted and bespoke promotion needs to be done to ensure girls, particularly in the 11-14 year old age, are well informed about what a SET career could offer and are encouraged to continue their education in the STEM disciplines, through both the graduate route and vocational progression pathways such as apprenticeships.
- Diplomas and their mix of practical and academic activities and aptitudes may also help encourage more girls and young women into engineering. The ETB will be monitoring this closely to see if it can help ensure this is the case.
- Employers need to ensure that the jobs they offer viable options for those who also choose to have children, which means that both industry and academia both have to acknowledge that the full-time working week is but one of a variety of options for employment in the future.