2030 Vision Cambridge

Good evening Ladies and Gentlemen, my name is Kim Walker and I work for Marshall Aerospace in Cambridge. Tonight I would like to share my experience and views on the need to link Education and Industry; they are my views and not necessarily those of Marshall Aerospace.

I have a multi-disciplined background within the Aerospace, Manufacturing and Chemical engineering arenas alongside FE College Lecturing experience.

Engineering is a progressive, often fast paced and evolving industry that offers challenging and rewarding careers. An employer's needs are sometimes vast and complex and configuring education to meet with those needs is an enormous challenge.

Marshall Aerospace recruits from all sectors of the education system and during the 2011/12 apprentice recruitment process, it was apparent that there had been a shift in the level of academic achievement by our applicants; resulting in unusually higher scores attained in the aptitude testing.

We [at Marshall] initially found this positive shift quite exciting and anticipated recruiting some very high achievers that would go on to develop well at Marshall. We also speculated that this could be an indicator that paid apprenticeships were becoming a better option for those that would normally go on to university but do not want the burden of high tuition fees.

The interview process however, soon brought us back down to earth as we discovered that basic engineering problem solving and manual dexterity skills were poorer in relation to those with higher academic results. Those that displayed the highest levels of problem solving and dexterity skills were those that had achieved average to above average GCSE's in relevant subjects.

We have found that successful future engineering and technical employees are usually those that:

- Can demonstrate a keen interest in aviation and engineering.
- People that have an understanding of aircraft.
- Those that can demonstrate some experience in a 'hands on' project. This may be something as simple as repairing bicycles or perhaps a school project.

During the interview process we try to determine their level of interest and knowledge into aviation. Where that knowledge is very limited, we discuss with them their engineering knowledge associated with other disciplines.

However, in recent years we have found that the candidate's knowledge is becoming more and more dilute; this despite the fact that resources are more

readily available to carry out research and to get technical and business information.

Hands on experience does appear to be less evident amongst applicants. Is this attributed to a decrease in work experience opportunities with employers?

Work experience is an excellent method of exposing students to industry and also career planning. However these opportunities are becoming scarce as H & S restrictions and the potential risk of liability faced by employers make the risk averse option more popular, i.e. do not offer work experience.

Successful applicants however were able to talk to us about engineering projects carried out that ranged from simple engineering tasks to motor vehicle maintenance or electronic projects and experiences.

Indeed I have found, during my tenure as an engineering lecturer in FE colleges, that the more successful students were those that demonstrated an interest in engineering and had carried out various engineering projects. But how is this interest generated in a world where most teenagers want to be a celebrity or footballer and where being 'brainy' is considered un-cool?

I believe schools, with help and support from industry, should generate interest early on in a student's life through team and individual engineering project competitions.
I think engineering and technology skills should be encouraged in the early stages of students study and the endless possibilities within the engineering arena should be promoted and glorified. This has to start happening in order to reduce the life skills preparation void that exists in most students between school and employment.

I believe that the local education authorities have a valuable opportunity, through this committee and steering group, to establish links with local industry and should use this to set up the following;

- A liaison officer from each sector of local industry who can offer support and advice on career choices and in lesson planning within regional schools.
- An annual technical/engineering schools competition, run by local industry for regional schools to promote independent thinking, dexterity and ingenuity within youngsters.
- An industry and school based drive to promote engineering, its core values, its possibilities and its necessity to society as a whole to school children from an early age.

I know from my experience within industry and education, if educationalists and industrialists do not start working together in a concerted effort to prepare young adults for employment; reduce this preparation void, more and more students will lack the ability and appropriate skills to support industry.