



Industry Forum

Business Excellence Through Inspired People

April 2015

Skills needs in the changing global manufacturing landscape

This year Bosch, the global electronics firm who are a major player in the automotive supply chain, are recruiting nearly 80 engineers in the UK as part of a much larger worldwide expansion. A spokesman explains that as connectivity expands in every business sector from mobility to industrial technology, the importance of software does too. This is driving their worldwide demand for more engineers.

A survey of the UK labour market in March 2015 by the Recruitment and Employment Confederation finds that salaries are rising quickly across a number of sectors. The most sought after categories are engineering and financial. According to the chief executive of the Confederation increases in starting salaries are being driven by skills and talent shortages .

In the USA, The Manufacturing Institute in Washington DC has completed a forward look at the recruitment needs of the US manufacturing sector, working with Deloitte with a survey of 450 firms. The results suggest that a major skills shortfall is emerging in US manufacturing. It threatens the sector's ability to meet customer demands, its ability to increase production and its ability to implement new technologies and raise productivity. A major factor is the retirement of the 'baby boomer' generation coupled with the difficulty of attracting suitable quality younger recruits to the sector.

The forward look proposes the introduction of major programs involving a wide range of stakeholders. The sector as a whole must communicate with the younger generation how much it presents viable career options. Clear competency models are needed coupled to role based skill requirements as part of major training and talent management strategies. The industry must pursue high performance team working supported by high performance management.



In the UK, the automotive sector has come together with other key players to form the new Automotive Industry Partnership, a similar approach to that proposed in the US by the Manufacturing Institute. It aims to inspire the next generation of automotive engineers and technicians, create new routes into

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automotive careers and increase skill levels in the industry. The Automotive Industrial Partnership consists of the UK's largest automotive employers – Aston Martin, Bentley, BMW, Ford, General Motors, GKN, Honda, Jaguar Land Rover, Nissan and Toyota – as well as SEMTA and SMMT. It is estimated that by 2020 at least 50,000 jobs in the UK automotive sector will need replacing, with skills priorities in strategic advanced technologies linked to increased connectivity, advanced propulsion and lightweighting .

Automotive Industry Partnership initiatives include:

- Supporting the development and roll out of robust and high quality new world class Apprenticeship Standards, with the development of Trailblazer Apprenticeships in seven key areas.
- Piloting a range of programmes to attract more work ready new entrants to the sector, including giving 4,500 Year Six students an experience of working in the industry through a one day production simulation and taking on 960 11-16 year old Industrial Cadets, to develop vital industry skills in team working, communications and problem solving over a six day programme
- Providing a route to work for 19+ year olds, with a 15 day programme offering vocational training and simulated work activities designed by their potential future employers.
- Assessing functional and employability skills leading to further work experience at a host company, helping young people with little or no workplace experience and vocational skills on a route to possible future apprenticeships
- In depth research to establish automotive industry employers' current and future skills needs.
- Developing industry approved high quality learning and development solutions that are relevant to job roles across the whole industry.
- Formally accrediting quality assured training organisations to deliver industry approved frameworks, qualifications and programmes
- Upskilling the existing workforce and retraining and recruitment initiatives to bring new talent to the industry, which will benefit large manufacturer and SME supply chain employers.
- Attracting 10,000 apprentices and 2,000 graduates by 2018

Looking further ahead, Nesta, the UK national innovation think tank, have just published the results of a survey of young people's opportunities for and attitudes to digital creativity, entitled Young Digital Makers. It starts with a recent House of Lords report on digital skills which warns that there is a lack of skills in the UK in making with technology which means that with digital business developing so rapidly there is a serious risk that the UK could be left behind.

For Nesta, digital making involves a range of skills and understanding based on the idea that learning about technology should be based on making things with it. Nesta have found that face-to-face interaction with others is a vital part of developing learning in practical activities and they have focused on organisations that create that kind of opportunity.



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Nesta have found that digital making gets strong support from parents:

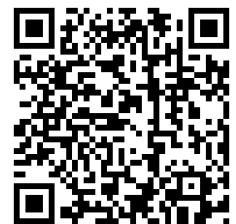
- 89% think it is a worthwhile activity
- 84% think it is important for careers and jobs
- 74% would specifically encourage a career in digital making
- 99% think computing should be taught in schools
- 53% have bought something to help children do digital making

But only 12% are able to signpost children to online or face-to-face opportunities.

There are important gender differences in attitudes to digital making. 17% of boys use digital making as a way of making money whereas only 9% of girls do. Nearly half the boys surveyed find digital making technology interesting whereas only a third of girls do.

Nesta conclude that young people need to be supported as digital makers across the UK, not just in London where there is a concentration of opportunities for them. Nesta have also found that there aren't enough technology professionals to work with the broad mass of young people on digital making but the survey found plenty of examples where non-professionals facilitate digital making with suitable resources and support. They want clear pathways to excellence to grow young people's ambitions as digital makers and help them fulfil their potential in and out of school. Nesta are currently planning the next step for the UK digital making programme.

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