Guest Blog | Developing the Life Sciences workforce for a new digitally-driven reality

Alex Felthouse, Managing Director of Eisai Manufacturing Ltd and Chair of the Science Industry Partnership Futures Group

A significant aspect of the research is focusing on the impact of emerging technologies, such as Artificial Intelligence (AI), as well as on the skills needed within R&D and manufacturing across Life Sciences to identify what we need in addition to current available training provision. It is telling us that we must, as a matter of some urgency, ensure the UK's next generation coming into our sector possesses the skills required to be able to adapt to what is becoming a new digital reality for us all.

We hear all the time that new technologies are threatening the jobs of today, but we also know that they are creating fantastic new jobs and possibly entirely new digital functions in our organisations. It is here that we will need skilled individuals who can adapt to constant change and to deploy these new technologies.

Data has the potential to improve decision making, reduce waste, increase responsiveness, and enable connectivity between people, research and products. Leveraging data to achieve these productivity goals and make the UK globally competitive is the challenge and one that is reliant on a new skill base.

For example, companies in our sector are now able to gather enormous volumes of 'big data', however, unless our employees can analyse this information and action the insights it delivers, we won't actually derive benefit from the technology we have at our disposal.

We have now conducted a number of in-depth consultations with over 40 Life Sciences employers, stakeholders, and training providers to identify the key trends shaping the Life Sciences sector.

This has revealed that our sector faces acute skills gaps and shortages around data science, AI, machine learning and automation. While there is a huge amount that is fantastic in the training landscape, employers also report that training provision is not always fit-for-purpose and the content of degree level training in STEM subjects is not yet meeting our future needs.

The low level of computing skills being developed within education, particularly within younger age groups is a concern from the sector; the very strong competition for digital skills from other sectors is a significant preoccupation for our recruiters. Sector employers also report that there is still, in some cases, a huge misunderstanding about what our sector can offer in terms of jobs and career progression.

While we have some fantastic apprenticeship standards, there still remains a lack of collaboration between employers and providers currently delivering science apprenticeships, with the urgent need to come together regionally and nationally to

build cohorts and highly specialist provision. We also desperately need more support for the critically important SMEs in our sector to overcome barriers to uptake.

Solutions could range from mandatory computer science studies from a younger age to GCSE, to the inclusion of data science within science degree course curricula. Apprenticeship employer consortia could overcome the tyranny of small numbers for technical training and stimulate specialist provision in our regions. Training providers need decent cohort sizes to invest in such training.

Employers need to play their part in designing these solutions, and we also need to consider how we upskill our leaders and managers, identifying internal skills gaps and closing them with flexible training.

Ultimately we need to establish a strong foundation for the digital skills we need to support innovation and growth.

The full results of the 2030 research will be published at the end of the year, and the SIP will then seek to develop solutions, working across the sector and with Government as part of the Industrial Strategy, to support our industries to close these skills gaps in our workforce.

Our Skills Strategy will ultimately support us to develop a Post-Brexit approach to skills, to identify provision gaps that mean we often need to look outside the UK for the skills essential for growth.

And of course our needs go beyond digital, we need access to a range of scientific skills not always available in the UK and maintaining expertise and scientific knowledge in innovation and research will be key to our future success.

Our report will evidence where we need to focus, and we look forward to presenting our recommendations and working with all our partners to progress our 21st century skills journey.

Find the Life Sciences 2030 Strategy here.