

Change is the new normal

Skills possessed don't match the skills needed

This is the first in a series of six articles examining the skills shortages in the construction sector, the energy efficiency gaps widening as a result of the lack of skills, and how digital transformation can help address these by changing the system. The author is Paul McCormack (right), Innovation Manager, Belfast Metropolitan College.

The green economy is defined as one in which value and growth are maximised across the whole economy, while natural assets are managed sustainably. Such an economy is supported and enabled by a thriving low-carbon, environmental goods and services sector. Central to this new green economy is a vibrant

green construction sector that would help contribute increased resource efficiency and resilience to climate change. So, how does that impact those in the built environment?

In many countries across Europe the generational baby boom of the 1950s and 1960s is now retiring from the workforce and leaving big gaps behind. Smaller succeeding generations mean that there are fewer people



available to fill these newly-vacant roles. This generational gap – allied with the negative stereotype about construction work – has led to a mismatch of skills needed versus skills possessed. Further compounding the problem is the increasing “university pathway” pressure on young adults and an accompanying drop *in lieu* of those taking up trades.

Unless we radically overhaul our skills and training systems this scenario is guaranteed to continue. However, if we take full advantage of technological innovation, especially digitalisation in the skills process, then we can help solve the problem. New digital technologies are now enabling people with the necessary skills and training to do jobs they previously could not.

Nonetheless, bridging the skills gaps in construction is a complex challenge for everyone involved that requires a comprehensive, cohesive strategy with all partners, including relevant government departments. In addition, we must invest to ensure that training and upskilling is properly resourced and delivered in a fashion that is commensurate with industry needs.

To begin with, we must fully embrace digitalisation and use the digital tools and technologies to enhance training and upskilling efforts, including through e-learning platforms and virtual reality simulations. Digitalisation must also be



A ventilation system installation and repair service technician at work.

used for delivery, support, certification and measurements of success.

We must also encourage a more diverse and inclusive workforce to help attract new talent, and ensure that the skills and perspectives of all workers are valued and fully utilised. Providing opportunities for career development will also help workers stay engaged and committed to the industry.

Innovation in skills delivery

Innovation in skills delivery is essential to increase the effectiveness and efficiency of the workforce. Projects such as ARISE are making maximum use of digital training platforms, enabling workers to access training materials and resources from anywhere, at any time, using a computer, tablet or smartphone. This makes it easier for workers to fit training into their busy schedules and can lead to more consistent and effective learning outcomes.

Equally, BIMcert uses microlearning modules, breaking training materials down into small, easily-digestible modules that can be completed quickly. This approach also helps create a work/life/learning balance.

Additional digital tools include virtual reality (VR) training. This technology can be used to create

immersive training experiences and to practice skills in a safe, controlled environment.

This can be especially useful for hazardous or complex tasks that are difficult to replicate in a traditional training setting.

Other factors

However, digitalisation is not a one-size-all panacea. There are other factors that need to be addressed. For example, there may be cultural and social barriers that prevent certain groups from entering the construction workforce. There may also be issues related to the availability and accessibility of training and upskilling opportunities. These require broader policy and investment decisions beyond digitalisation.

Additionally, while digitalisation can help to address the current skills shortage, it is very important that we also look to the future and

anticipate the changing needs of the industry. The skills and knowledge required today are likely to evolve and change over time, and it is likely that digitalisation alone may not be enough to keep up with these changes.

In a rapidly-changing world, it is essential for research, innovation and skills to keep pace with technological and market developments to support the realisation of societal goals such as sustainable development, net zero buildings, a circular economy and resilience.

However, the solution is not just about adopting new technologies, but about changing the mindset, behaviours and values of organisations, professionals and individuals. Industry leaders need to create a culture of innovation that encourages creativity, collaboration and experimentation. In the second article of this series, we will explore some of the key elements that can help bring that about. ■

