

# RESPONDING TO THE TRAINING CHALLENGE

David Strong launched Inbuilt in December 2007. Previously, he was Managing Director of BRE Environment, and before that he had also held roles as an Executive Director of EA Technology, Emstar and WS Atkins & Partners. Originally a graduate of Bath University in Building Engineering, he was awarded a doctorate by Oxford University in 1980. David is currently Chairman of the EU Energy Performance of Buildings Directive Implementation Advisory Group (DIAG) and acts as a special advisor to the European Commission on energy demand issues. He is also a Visiting Professor at the University of Nottingham. He chaired the Quality of Life Challenge, Built Environment Group for the Conservative Party and in 2007 was responsible for establishing the UK Green Building Council, for which he presented with the 2007 Building Sustainability Leadership award.

**W**ith a flood of new regulations and complex technologies rapidly approaching, are you ready to prepare your workforce with the necessarily skills?

It's going to be a big issue for the construction industry generally, and for the heating and hot water industry too, as we all need greater familiarisation and understanding of the new codes, standards that await us. The rapidly changing regulations are driving innovation and the introduction of new technologies in a way the industry has never seen before.

The more we upskill and develop our technical competence, the greater the competitive and commercial advantages open to us in the very near future. Low and zero carbon technologies within the home and workplace are increasingly being specified and installers have to be able to respond effectively to this new demand.

Much of the new technology is considerably more complicated to install and maintain. Existing training programmes will need to be carefully reconsidered, as 'toolbox' type lectures simply won't be sufficient. We're talking about a serious investment of time and funding here to help the industry fully understand the technical application of developments such as solar hot water heating, heat pumps and micro CHP.

The first generation of heat pumps (launched in the late 1970s) failed miserably, predominantly because the majority of them were installed

inappropriately. The modern day technician needs a much wider range of skills than ever before. For example, fitting solar panels requires a basic set of plumbing skills as well as electrical engineering expertise. Additionally, there are health and safety considerations that weren't ever an issue before, such as working at height to fit solar panels.

British Gas has recognised the commercial opportunity and the challenge. They recently announced that the UK's first dedicated Green Skills Training Centre will be opened in South Wales later this year. The Centre will aim to train over 1,300 people each year, including their new staff and existing workforce. The objective is to maximise their skill base associated with installing and maintaining the next generation of green, clean technologies. More of these schemes need to be opened and supported; otherwise business will miss out on hugely important new business opportunities within the heating and hot water sector.

As you will know, achieving ultra-efficient, low energy buildings isn't easy. It needs outstanding expertise in building physics and exceptional attention to detail. In-depth technical understanding will be of paramount importance if the new technologies are going to perform correctly.

But technical skills are just part of the equation. I'll leave you with another thought: if the construction industry is really to prove its

value in helping governments and clients to tackle climate change, then we need to demonstrate an understanding of what we at Inbuilt call 'whole system thinking'.

This is because many low and zero carbon buildings fail because they are overly-reliant on complex construction methods or technologies. The latest 'eco system' may provide a short-term solution to meet BREEAM, LEED, Code for Sustainable Homes or similar targets, but in the medium and long-term such technologies can sometimes be entirely unhelpful, creating additional energy demands and perverse outcomes that undermine the original sustainability objective.

To achieve genuine sustainability, we need elegantly simple solutions which are easy to construct, control and maintain.

This needs us all to work together on a different approach. Whole system thinking means looking at things in the round, not just the individual parts. In this way we can find those small changes that will solve multiple problems. This approach usually results in dramatic cost savings, leaps in efficiency and a strong competitive advantage.

Whole system thinking is also about collaborative, multi-disciplinary, integrated team working like we've rarely seen before. At Inbuilt we have developed a 'whole system' approach to delivering sustainability, which involves a close and collaborative partnership with our clients and a complete integration of the design and construction process from day one.

Are you prepared to be part of this integrated team? Those with the greatest technical skills, an appreciation of whole system thinking and a commitment to collaborative working will be the best placed to exploit the low carbon revolution!

