

Special report

Innovation roundtable

The windfalls and pitfalls of innovation

The latest *H&V News* roundtable focused on innovation, tackling subjects from skills and materials to legislation and the economy

Innovation is something that every company would like to be seen to be associated with, but there are potential pitfalls to avoid, such as adopting a new material or technology too soon.

This was one of the many messages that came from the latest *H&V News* roundtable, where a mix of delegates produced an extensive discussion on many aspects and issues within innovative practice.

SES North East regional director Steve Joyce opened the discussion by describing his company's approach to innovation, which included the careful selection of technology, materials and processes that would have the most practical benefits for the business.

The use of the SES pre-fabrication facility had proved highly beneficial in a number of ways, including the testing and evaluation of materials. Following trials with a number of materials, the company has recently adopted crimped copper pipe fittings as its most favoured material.

The firm has found that the creation of its pre-fabrication facility, for which Mr Joyce is a non-executive director, has also had many benefits. "We've reduced the amount of onsite work by 25 to 30 per cent," he said. "We build as much as we can offsite."

Another SES innovation was the use of BIM technology, he continued, providing 3D modelling and a library of around



Attendees

- ▶ Matthew Edwards, Swale Heating sales director
- ▶ Marcos DeCastro, Crofton director
- ▶ Nick Hay, UK Copper Board
- ▶ Steve Joyce, SES North East regional director
- ▶ Peter McCormack, Silverline chairman
- ▶ Douglas Merrick, Ecovert business development director
- ▶ John Sharp, Balfour Beatty Engineering Service business services director
- ▶ Ant Wilson, AECOM business unit director

30,000 parts, and is regarded as an essential means to manage risk.

The debate then returned to the subject of offsite fabrication, with Silverline chairman Peter McCormack questioning whether this method cuts cost rather than risk.

"It's not just about cost though, is it?" asked Balfour Beatty Engineering Services business services director John Sharp. "It's actually guaranteeing the cost of the installation and removing risk."

Managed savings

Mr Joyce said it will always be difficult to manage all aspects of cost. "You price the job, things happen, don't they?" he said. With industry productivity recorded at between 60 and 70 per cent, offsite pre-fabrication helps to maintain

efficiency and reduce the issues that occur on site that inevitably result in delays, he added, but emphasised that common sense should always prevail in its use.

"We actually look at the hours spent on site," said Mr Sharp. "By the time you've taken into account the transport and the installation once it gets to site, there's no real difference in cost."

Spending 30,000 hours on pre-fabrication could save 45,000 hours on site, he explained, driving improved efficiency into the business. Care should be exercised in choosing which operations were moved offsite and the type of materials used, he advised.

Mr Joyce cited how his company's offsite pre-fabrication facility had proved invaluable in the winter of 2010. While many sites

“The rates were clearly unrealistic but the way they handled it was just shocking”

Matthew Edwards,
Swales Heating



ground to a halt due to heavy snow and sub-zero temperatures, SES was able to continue prefabricating installations without any loss of productivity, he said.

AECOM business unit director Ant Wilson cited the issue of complying with ever-stricter legislation, along with the benefits of improved quality proved by prefabrication.

“Hopefully you’ll get better quality through doing it in a controlled environment, as opposed to someone doing it up a ladder,” he said. “If it’s the same price for a better product, then you’re onto a winner.”

While innovation was seen as an essential element of delivering projects efficiently, the need to exercise care in choosing materials was mentioned by several delegates during the debate.

Mr Joyce again referred to his

company’s use of crimped copper because of its robust qualities. Mr McCormack added that he had found copper components more stable than other materials.

Communication crucial

The discussion then moved to the need to be able to communicate the benefits of innovative practice to the client and others. Training and professional development was described as an essential element to facilitate effective implementation of innovation in a number of areas. Mr Wilson drew attention to the need for everyone involved in the project to understand each other.

Following an explanation of the use of standardised design methods for particular projects, such as schools, which were not always considered the ideal procedure, Crofton’s Marcos DeCastro

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Steve Joyce, SES

said it was sometimes necessary to educate the client to gain acceptance of innovative practice. “There’s a question mark around design,” he stated, which could be overcome by educating the client.

The need for all partners to work closer together turned the discussion to building information modelling software, which was hailed as a way of drawing project participants together.

Mr Joyce said that one issue is that everyone has a different understanding of how BIM works. This led Mr Sharp to note that product substitution was something that drives innovation when handled correctly.

The limitations with BIM were identified as an inability to show complexity and cater for the use of different products and materials.

Swale Heating sales director Matthew Edwards moved the debate on to renewable energy, which had been successfully introduced into the company, he said. “We backed it up with the training and got the right people in to fit it,” he said, further explaining that the company had been determined to deliver a professional service from the outset. This operation had been disrupted by the government’s sudden slashing of the Feed-in Tariff, he explained.

“The rates were clearly unrealistic but the way they handled it was just shocking,” said Mr Matthews.



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Roundtable (continued)

The industry had been given no warning of the severity of the cuts and very little time to react. The element of trust was important to encourage innovation, he added, but the government's action had let end-users down and had already had a detrimental effect on a number of businesses.

Government strategy

This led to a number of points being made on the lack of a clear and effective strategy from the government that would not just favour the more affluent members of society, while encouraging more widespread uptake of renewable energy.

Leading on from this, Mr DeCastro said there should be more debate around the use of district heating schemes and the use of combined heat and power, as well as educating end-users on the benefits of renewable energy.

The problem is that no one is making the necessary decisions and the governments' priorities are changing on an almost daily basis, said Mr Joyce.

On the subject of the use of different components and materials and identifying relevant applications, Mr Sharp said he could not understand why manufacturers had not produced a library of products, which would make everyone's lives easier and save a great deal of time and effort.

Moving onto to the topic of new practices, one element of introducing them was the de-skilling of the workforce, it was suggested. While this was accepted in part, it was also argued that this could allow tradespeople to become multi-skilled and branch out into new areas.

There was, however, general agreement on a number of elements essential for supporting the argument for innovation. Among these was investment in training, increased collaboration between all parties engaged in the project, and education of clients and users to highlight the benefits delivered.



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