Innovation in a squeeze

An approximate summary of the presentation to the Rumford Club Dinner Discussion on Thursday 17th November 2011.

This short synopsis is intended to be read alongside the slides of the evening.

I was introduced to engineering and innovation through my involvement in building a 53ft ferro-cement sail training boat, Morning Star of Revelation, as a schoolboy (slide 2). It was built by one of our teachers, and he chose ferro-cement because it could be built by a determined physics teacher and an army of fairly unskilled schoolboys and other helpers.

We are in a real squeeze. Not just on incomes (slide 4) but other resources, including water, energy supply, with the real prospect of the lights going out in the UK at some point in the next few years to to a lack of generating capacity. Food supplies may become more scarce (slide 8), and of course we have the current debacle of the Eurozone.

The current policy environment for our sector is also fairly complex, unco-ordinated (in spite of the Carbon Plan) and there are many policies being pursued with real haste by the Coalition, eager to avoid the fate of the first Blair administration, in not using the first term of the new Labour government to drive their policy agenda.

We have commitments to move towards zero carbon new buildings (slide 11) and the building regulations are getting tougher (slide 12).

So, what are we to do? We will need to be innovative!! What does innovation mean (slide 16) and what might it look like? Slides 18-20 show Merddin Emrys, the patented double fairly articulated engine, with a double length boiler mounted on bogies, built in the 1870s as a way to double the locomotive power on the Ffestiniog railway as an innovative alternative to increasing track capacity. (Can we learn anything here for our own overcrowded railways, I wonder as I type these notes).

Are iconic buildings (slide 22) innovation, novelty, or fashion? Is the Olympic Velodrome, with its cable roof structure weighing 80 tons, compared to the 3,200 tons of the aquatic centre roof, a better example of product innovation?

Will policy, such as the government's objective to get BIM adopted on most government projects, drive innovation in both products and processes in the industry? There are a number of key policies relating to energy in buildings – how will they drive innovation? What is zero carbon going to look like, and how might that deliver innovation, or how might it need innovation to deliver?

How will new processes, such as soft landings, help us to improve our offering?

And is the a place for organisational innovation? We have trade bodies, skills councils, RTOs, professional bodies, all under pressure in the current economic climate. Is it time to question whether the current arrangements of industry bodies best serve the industry and the people who work in it, or the businesses and people that we work for? Or is there room for innovation and reorganisation there?

The status quo, business as usual, is not really an option. We have to change, but do we know how?

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