

**view from the top** david hughes

# All-new technology and innovation centres 'a bad idea'

In October, David Cameron announced the allocation of £200 million to the Technology Strategy Board to set up Technology and Innovation Centres as part of the drive towards better exploitation of basic research.

Even if this turns out to be new money and not an offset for TSB cuts yet to be declared, expecting TICs to be the key to growth is a mighty big ask given a combined UK industry and government research spend of almost £20 billion. October's announcement was light on detail; a more detailed definition is expected soon.

Consider how the TICs are likely to develop. The funding amounts to £50 million a year for the next four years. Each centre needs at least £5m a year to make any impact. This would be consistent with investment in, say, the Engineering and Physical Sciences Research Council's Innovation Knowledge Centres but much less than that in government-backed, industry-led organisations like the Energy Technology Institute. So, we will probably get between five and eight TICs.

The announcement suggests government is thinking about an all-new set up. This is a bad idea. By definition the TICs will do development work, so it would be sensible to encourage organisations with established facilities to participate. The AIRTO trade group's intermediate-technology organisations would be ideally placed, for example, as would the technology centres already established under previous EPSRC/TSB grants.

The question arises of whether TICs should focus on sectors or technologies. The argument for sector-based TICs is that it is clear where the exploitation is expected, but it is vulnerable to the 'picking winners' jibe. If they become technology focused, the sources of knowledge are more easily identified and the same technology might support several areas of exploitation. But the risk is that the focus remains on research not exploitation.

The most effective strategy ensures that the outcome is demand-led by encouraging dialogue between industry and academe. Knowledge Transfer Networks were originally set up as an integral part of the TSB process to ensure this exploitation focus.

Some KTNs have been more effective than others, but a mechanism for ensuring a demand-led outcome seems essential. The centres must concentrate on translational development, neither duplicating university research nor acting as contract R&D providers. The latter leads to the slow incremental innovation for which Germany's Fraunhofer

institutes—the university-industry partnerships on which the TICs are modelled—are often criticised.

There is clearly an expectation that industry will dominate the TICs' strategic direction and funding. But how innovation is diffused should be a central operating issue.

Networking will be key to the TICs' success, as it has been in successful technology clusters like the 'Cambridge Phenomenon' and Silicon Valley. But these networks have taken time to develop, and how they emerge is not well understood. The TICs offer an opportunity to consider how networks accelerate the diffusion of innovation and hence promote economic growth. The use of social web technologies must be high on the list of interventions.

Also important is access to research knowledge wherever in the world it exists. The TICs should not confine themselves to UK research but should ensure that their source networks are global.

If regional technology clusters can be an important source of economic development we need to show how that can be used in conjunction with the efforts of other regional players: trade associations, local authorities and trade unions. The debate on Local Enterprise Partnerships presents an opportunity for TICs to show the role they can play in this.

In evaluating the proposals for application areas I would assess on these five criteria:

- How business provides strategic leadership for the centre—seen in financial commitments and a plausible, demand-led business plan based on translational development and an exploitation pace to ensure competitiveness.
- At the technology-development level, what is the availability of facilities and evidence of the ability to collaborate with other global expertise?
- The extent to which specific programme objectives plan to engage their complete supplier networks and allow for involvement of small businesses.
- The mechanisms for accelerating the diffusion of innovation to create a dynamic exploitation cluster—in particular use of new social networking ideas.
- How the proposals integrate with and enhance other regional initiatives, in particular the fit with LEPs.

I suggest an open competition to decide the best.

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*Former DTI director general and chief scientific adviser David Hughes, who is managing director of the Business Innovation Group, was responsible for creating the TSB.*

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