

Is the white heat of Cambridge technology burning out?

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The 'Cambridge Phenomenon' might have made the city synonymous with innovation and technology, but can this small university town compete on a global stage? Clusters such as Silicon Valley and Shanghai cover much larger geographical areas and contain many more high-tech companies and employees. Should Cambridge look to align itself more closely with London and Oxford to form a 'golden triangle' - or forget about the concept of a 'cluster' and have an economic strategy that supports high-tech companies across the Greater South East?

'Cambridge ideas change the world'

Greater Cambridge is one of the most dynamic sub-regions within the UK economy. With a GDP growth estimated at just less than double the national UK and even US average, the region provided £12.2 billion of Gross Value Added in 2001. It has an entrepreneurial business community and great capacity for innovation, but compared to other regions around the world, seems to be lagging behind on a range of measures.

Dr Nicholas Miles, Executive Director of the Oxford to Cambridge Arc, warns that recent research undertaken by the Cambridge-MIT Institute also shows that the Greater South East as a whole is falling in world rankings of competitiveness and productivity: 'In order to compete we need to develop clusters of firms with economic weight so that they can carve out defensible positions in global supply chains and the international market place.'

'Kingfishers and vultures'

It is often quite hard to compare the relative sizes of different clusters. While everybody accepts that Silicon Valley is considerably larger than Cambridge, this is hard to quantify with accurately comparable statistics. One source contrasts 3,500 high-tech companies in Cambridge with 7,000 in Silicon Valley - but these numbers might well be measuring different things.

'I think everybody now accepts that the 3,500 figure is a gross over estimate,' explains Walter Herriot, Managing Director of St John's Innovation Centre, Cambridge. 'On a very purist definition, the estimate is about 900 and on the broader definition that we use at the Innovation Centre around 1,500. However, I don't think anybody has done an equally scrupulous evaluation of the 7,000 companies in Silicon Valley! Comparing Cambridge with Silicon Valley, Shanghai or even Malaysia is clearly unfair if only on the basis of population. It's like comparing a kingfisher with a vulture - and large may not always be beautiful or desirable!'

Looking at the total number of people employed in high-tech employment, the gulf becomes more obvious. Cambridge's 42,000 is only around 5% of Silicon Valley's 780,000. In fact figures from the recent Greater Cambridge Partnership / PACEC report into the future of the Cambridge Phenomenon show that taking total numbers of people in high-tech employment, Cambridge is smaller (in some cases significantly) than all but two of the worldwide clusters measured.

Even adding the estimated 62,000 in the Oxford M40 corridor and 411,000 in the Greater London Metropolitan Area, the 'golden triangle' would still contain less people in high-tech employment than Silicon Valley. 'While size matters,' argues Dr Peter Hewkin, CEO Cambridge Network, 'so does quality. To some extent our lack of size can be compensated for by excellent networks which link business, finance and academe both locally and to their global peers.'

Good neighbours

In biotech, Cambridge is one of the most significant clusters in the world and the largest outside of the US, but as Jeff Solomon, Chief Executive of ERBI explains, closer links with neighbouring clusters could improve its position even further:

'Biotech companies are not growing away from the clusters, which shows how essential they are for the industry. This may change after the industry has matured, but this still has a long way to go.

'Essentially Cambridge reflects what is happening on the open markets in the USA but, as usual, with a lot less money! I was speaking to my equivalent in San Diego and all the issues were exactly the same - it is just that they have three times as many companies!'

While Jeff recognises that the creation of a new cluster - as opposed to spontaneous formation - requires major effort in resources and money, he has seen the benefits it can bring to other regions.

'It put Scotland and Medicon Valley on the biotech map! 'Scotland' though is essentially Glasgow, Edinburgh and Dundee - similar geographical distances to Cambridge, London and Oxford - another reason for us getting our act together in the South East. ERBI is already working closely with our equivalents in London and Oxford.'

One company that has benefited from association with the Cambridge cluster is Melbourn Scientific, which provides contract analytical services to the pharmaceutical industry. Melbourn is finding increasingly that more of its business comes from overseas, and although it has made a conscious decision to become more international - making changes to its organisational culture, use of language and decision making - it still values being 'based in Cambridge'.

Managing Director Steve Westcott comments that while he would support the creation of a larger region, he is keen that it is a long-term commitment, with tangible benefits to companies in the region. 'It seems to me that some individuals coin these terms and promote them, but without a long-term plan for sustaining the effort. All too often these new regions seem to wither on the vine and not have much of an impact'.

'Identifying the key beneficiaries of the triangle being adopted, getting them to buy into this approach and making sure someone is in charge of maintaining momentum in the early years is essential to its success. The promotion should be clear - it is for the benefit of those within the triangle and not mere idealism.'

His views are shared by others, concerned that this new 'Super Cluster' should be more than just a re-branding exercise. 'Pouring money into creating a contrived region is wasteful,' argues Ian Macpherson, Business Development Manager at the Oxford Science Park.

'I don't believe that any British government - or an appointed RDA - is capable of efficient planning and delivery of a 'five year plan of sustained funding to create a world-class, world leading technology base.' The Government should be discouraged from believing it can successfully meddle with creating a world leading technology base - it should stick simply to the job of infrastructure.'

Ian cites tax regimes that encourage entrepreneurship and investment as important elements of this infrastructure. Reducing the bureaucratic burden is vital for companies in fast moving markets.

'As with EU funding,' explains Dr Hewkin, Cambridge Network 'the overheads involved in applying and the strings attached when funding is offered by the UK public sector makes it difficult for organisations - operating in fast moving markets and disruptive technologies - to be supported in this manner.'

The future of UK plc

There is also a growing feeling that viewing Cambridge as part of a larger regional cluster would have benefits. 'Having positioned ourselves appropriately,' explains Walter Herriot, 'What we then need is to build on infrastructure and relationships within the triangle to improve the quality and number of start ups and success rates.' Whether the future of Cambridge lies with Norwich and Ipswich, Oxford and London or perhaps closer ties with Silicon Valley and Shanghai, one thing is for sure: the continued growth of Cambridge could have a large effect on the UK as a whole. **'This area is of national importance and improvements here are likely to lead to a general improvement for UK PLC,'** concludes Dr Nicholas Miles, **'Conversely if we get it wrong in the 'golden triangle', we get it wrong for the whole of UK PLC.'**