

The future of the East of England

Ian Pearson, Futurologist, 14 Dec 2006

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I spent my early childhood in Cumbria and then lived 17 years in Belfast, which has all the same facilities as London, on a smaller scale. In both regions, the people are very sociable, and everyone knows all their neighbours. Here in the East of England, there is a conspicuous lack of both mountains and big cities, and a very different social culture, but over the last 21 years, I have grown to like the region, even if I still have no idea what my next door neighbours are called.

Regional development strategies generally come down to identifying what is different about the region, preserving and capitalising on its strengths and trying to turn even disadvantages into strengths.

The biggest strength of the region is perhaps the enormous emphasis on R&D activity. As technology change accelerates, this will become ever more important. With globalisation rapidly reducing costs of other parts of the industrial production cycle via outsourcing, the creation of ideas and innovation offers a welcome in-sourcing capability. The region must do all it can to try to retain and nurture this valuable asset. Making the region a pleasant place to live is obviously important, and provision of appropriately priced property with good cultural and social facilities with a good transport infrastructure is the best way to do this. Transport is the obvious weak link, but can be mitigated by accelerating the incorporation of good IT into transport infrastructure. There are many simple solutions to this, such as redesigning bus routes and frequencies around a ring and star architecture, restructuring roads and traffic light phasing to enhance flow, road traffic information services, and reducing time collecting fares on buses by using electronic billing services or simple ticket stamping machines like in Amsterdam. There are also many proven schemes for car pooling that allow people to share a large car pool on a short term rental basis.

Undoubtedly, the region will have to accommodate some of the rapidly increasing UK population. While the eastern region has a relatively low population density, it is likely to be a target for much of the new housing needed. The current lack of road infrastructure is certainly a big problem, and is unlikely to be fixed any time soon, but actually that could work to our advantage in the longer term. Even the damaged railway to London could put us in pole position for new architecture installations

there. New transport systems will need a different approach, and that will give is a perfect opportunity to leapfrog other regions that are less overdue for investment. Transport is at the forefront of climate change debate, and everyone recognises that it needs a more environmentally friendly approach. Meanwhile, social inclusion is an increasingly important political issue.

Installation of electronic highways with automatically driven electric cars will dramatically increase road capacity, reduce accidents, and extend transport from the house to everyone. It can do all that while almost eliminating CO₂ pollution, especially if the power comes from the next Sizewell station or off-shore wind farms. The required technology won't be here for another 15 years yet, but then neither are the promises of investment. They will probably arrive around the same time for us in this region. The basic technology is automatically driven cars, already demonstrable, but need development. People would not need a driving license to use them, nor to be in good health or with good vision, and the cars could pick people up right from their door, so they could solve social inclusiveness requirements very well. In fact, it is highly likely in this scenario that fleets of cars would be owned by private firms or councils and people would just request one when they need to go out, via a key-click on the internet or mobile phone. It is also possible to replace trains with lighter weight 'pods' or even cars, all driven electronically, just a few centimetres apart, and they wouldn't even need rails to guide them, at once making an easy bridge between private and public transport, and removing the enormous problems of signalling, cracked rails, points, and congestion. While today, regional railways have less than 05% rail occupancy, packet switching systems could increase that to 80%, making the cross-Anglia railways a huge help to alleviate road congestion. This might sound fanciful, but already, road trains are becoming quite mature technology, some high end cars have semi-automatic driving capability, and we already have light rail driverless systems in common use. More development can utilise these technologies with future positioning systems, self organisation, inter-car signalling, linked engine management systems and so on. Even electricity could be provided to electric cars during the long part of the journey using a 'Scalextric' based mechanism. This kind of future rail architecture could be roll out on regional and local railways first, and then eventually onto main lines. However, main-line solutions might favour a more conventional approach with just longer and more frequent trains.

Another area for environmental improvement in this region is to tackle landfill shortages and coastal erosion simultaneously by recycling plastic by compressing it into large blocks that could be dumped into the sea off the coast of Norfolk to prevent erosion. The 'plastic reefs' would act as a much-needed carbon sink, eventually creating reclaimed land, and the carbon trading profits could pay the costs.

People here live close enough to London to get to meetings easily when they have to, allowing people to work from home with ease provided there is good communications. Now, with the release of BT Vision, a basic platform is emerging that will allow people to videoconference at life size via their plasma TV.

Simultaneously, broadband speeds are still increasing rapidly, and wireless LANs are pretty much ubiquitous in homes. So it is becoming much easier to work from home. Better still, memory stick capacity is exploding, making it easy to carry everyday files to and from the office on a key ring. As these technologies go through another two to three years of development, East Anglia will become a much more attractive place to live, combining as it does a relatively rural lifestyle with easy occasional access to civilisation.

The same videoconferencing technology can alleviate social inclusivity problems for our significant population of aged, who often have little social contact. Using profiling technology, they can easily be put in contact with potential friends via the network, and of course can use it to stay in touch with distant friends and relatives. While it is not as good as having someone physically visit, high quality life sized video communications is a great deal better than the alternative of no social contact.

One of the major social trends at the moment is people starting to interact in cyberspace, via sites such as MySpace, Second Life, Age of Warcraft and so on. These are just the first embryonic developments of an increasingly important virtualisation of our world. It is very important that the East of England gets involved in this. Although it is just a few web sites as yet, it will grow rapidly until people are spending a great deal of time interacting with other people on-line for both business meetings and for socialisation. Like the World Wide Web today, it is likely that virtual environments will be the default on-line mechanism for meeting people for business or social reasons. Most on-line interaction will be done in this way. Over time, virtual environments will link to real environments, making what is called augmented reality, where computer generated data and images are overlaid on the real world view via a head up display. This allows the real world to be augmented substantially. Architectures can become dual, with both physical and virtual appearances for buildings. This can add a great deal of value, merging all the capability of computer games, entertainment and marketing with real world capability such as high street shopping. There are widespread uses for such technology. As well as making shopping more fun, it provides an excellent platform for government services, tourist information and business services. By providing public virtual platforms, the east of England could become a more attractive place to do business, with a wide range of publicly provided services made available to business, overlaid via wireless LANs onto the physical infrastructure.

The eastern region suffers from relatively low wages, an ageing population, and high house prices. As new housing is built and immigration into the region inevitably happens, the population will probably reduce in average age, caused by the lower age of immigrants from overseas, who also bring much needed skills. New housing will bring down the costs as it satisfies demand better. However, an ageing population is not so problematic in the future as it is now. As artificial intelligence and physical automation continue to change the nature of work, the future will see work being dominated more by interpersonal skills and human interaction than by intellectual education or physical dexterity. Our region will do better in such a 'care economy'. The elite skills in the new industries around Cambridge will of course

flourish for some time too, so we will have a good combination of new skills providing work for younger well educated people and care economy interpersonal skills benefiting from the increased life experience that goes automatically with being older.

The East of England has a range of top class IT companies, which provide a huge asset when coupled into the community, as many already are. Apart from providing high paying jobs, IT is of course the main source of change today. It is important for local governments to realise the importance of fully utilising IT to provide a good business infrastructure to attract companies. This will mean having wireless LANs all over city areas, experimenting with smart environments, providing lots of useful context-dependent data to visitors and residents. Also, getting in to augmented reality, overlaying the information in the user's field of view, and allowing people to make business contacts easily and link easily with other parties. As well as this, IT as a whole will start to converge with nanotech and biotech, two other areas of particular relevance to our region. As this convergence happens, new industries will emerge, and we are in pole position to capture key global markets. This will happen automatically through the spirit of enterprise that already exists here. What local government needs to do is to provide high class infrastructure and services to support this natural business activity. If this is done, the region will flourish even more. If not, the business will still flourish, but they will live elsewhere. Our region has huge opportunity. We must not squander it.