Milton Keynes and the roots of 'Smart' transport

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I did my first degree at University College London, and it was a joint degree in economics and geography, so on the geography side, I was working with people like John Adams and Gerald Manners in transport geography, geography of energy, and strangely enough, it was through that so that I first came to Milton Keynes, because I had to do a project in urban hydrology, and so in 1973, I came up here to Milton Keynes to examine the plans for the balancing lakes in Milton- that were being built at that time.

After I completed my degree at UCL, I looked around for other things to do, and a PhD came up at this strange institution called The Open University, so I came up here and applied for it, and quite surprisingly, it was offered to me.

And that was in the new town study unit, which was a cross-disciplinary research group within the social sciences faculty, so at the time, I got to actually work with geographers, economists, sociologists. The unit was linked to the development of Milton Keynes, and so I undertook a variety of studies. My PhD was built around looking at a comparative study of transport and land use designs in the different new towns, so I was comparing Milton Keynes to the likes of Tilford, Peterborough, Stevenage, Welwyn Garden City, and the like.

In the early '70s, Milton Keynes was just beginning to be built, and it had a master plan headed up by a team developed by a consultant, Richard Llewelyn-Davis, who intended to have a plan that was extremely flexible, so you have this grid road system with mixed and very distributed land use patterns. It was quite an interesting time because very soon after the development started, the first of the energy crises hit.

And then there were some reviews going on and some questions being asked as to whether such a car-oriented design was suitable. But the Development Corporation stuck to their guns and said that they were not going to change the plan, because if they changed it, it would lose its flexibility. There was something odd in that statement, but it carried on that way, and they

carried on building Milton Keynes to that same design until the Development Corporation was abolished in the 1990s and thereafter.

Milton Keynes always tried to be a centre of innovation, and early on, the Development Corporation, the council, and a lot of the developers around here sought new ideas and new ways of doing things. One of the big areas that emerged out of the 1970s energy crises was exploring how you could make Milton Keynes an energy-efficient city, and a number of innovations bubbled up early on around that.

There was an active solar-powered house, but then later on, Milton Keynes became very active in passive solar and improved insulation and providing demonstration projects that led the way for the rest of the country. So you had a number of energy-world-type exhibitions that were held here to try to stimulate ideas and new developments.

When the Development Corporation was abolished in 1992, the impetus for innovation got lost, but it remained very much part of the culture here. It was a culture that required attracting inward investment, and so that led to the idea emerging that the innovative aspect of Milton Keynes needed reinvigorating. So over the last 10 to 15 years, we've seen that emerge in a series of smart energy projects, culminating in the MK:Smart project, which is looking at smart innovations across a variety of areas in transport, water, energy, and also in how citizens can be actively involved in developments like that, rather than just being passive consumers of what big corporations put together.

If we look back over the years, you're going to realise that the garden city movement, of which Milton Keynes is a modern example, had some very radical ideas at the very beginning. It was not so much about a physical design as a social and economic design. The original garden cities were meant to be a means of income distribution, a way of having a more equitable future society.

And I think that sort of vision has actually been picked up in the smart city vision that we have at the moment. It is about not how you can use technology and big data systems for the benefit purely of corporations or big government, but MK:Smart is about how you can actually use those systems for the benefits of citizens of organisations, and how you can actually get a better society. Whether that will actually be achieved through smart technologies is another question, but I think that aim is there.

One of the problems that emerge from Milton Keynes is because it is such a low-density car-oriented design, is that it's actually a very bad place for operating public transport, and for many years, the argument was applied that, actually, you need to densify Milton Keynes and

rework it so that it can actually perform well in terms of conventional bus, tram systems. In actual fact, that hasn't happened.

But what's been coming together in the last few years is the realisation that new technologies are emerging which could allow us to entirely reinvent public transport systems, so in the first instance, you've had a number of new web-based apps and services built around those new apps. Uber is an obvious example of that. We've also got some trials in Milton Keynes of autonomous driverless vehicles.

If you start putting these components together, you've actually got the potential for utterly reinventing your public transport system. Instead of having large vehicles operating on fixed routes, to which have to walk one end, change one or two times, walk at the other, you may be able to have small vehicles that you book on a smart app, that comes to your door, that you should direct to your final destination without weaving around to pick other people up on the way. New technologies and new smart city systems are offering the potential to reinvent a lot of the way in which we work, just the same way that, say, perhaps a smartphone has totally reinvented the way we communicate. Smart demand responsive transport systems may actually change entirely the way in which we travel.

In terms of the future, I think it's all up for grabs. In terms of future transport systems, I think we may actually go along one path, which is to use advanced technologies to make our existing transport systems better, so we may have apps that help you book your buses, travel more seamlessly between different modes of travel, or you may have the opportunity to reinvent your transport system into something entirely new and different, and it's that latter that I think is the most exciting.

However, we are used to working in the way that we are at the moment. We've got large institutions and commercial organisations built around the existing regimes of how you do things. I think there is going to be a bit of what might call a regime war between the new way of doing things and the old way of doing things. We're already seeing this with some of the battles that are occurring over some of the new IT-based technology service systems like Uber. I think we're going to see more of that in the future.

I think one way of avoiding difficulties and battles over new ways of doing things is to identify areas where you can actually explore, have a few experiments, and where learning can take place, and that has been part of the idea of MK:Smart, that actually, Milton Keynes is a good place for learning. Back in the 1960s and '70s, the idea was to create a flexible city where new things could be tried out and I think we're starting to see that happen here and now, so perhaps through Milton Keynes, we may actually learn lessons that can be applied through the rest of the country, and also internationally.