

Spatial modelling for complex masterplans

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One of the most significant challenges in modern planning is to deliver new urban development in a resource-effective and energy-efficient way. Considerable efforts have been made to develop energy-saving building materials and technologies, and rightly so. But is this enough?

In this presentation I will argue that we can do more by controlling and reducing energy demand not only inside buildings but also between them. This means creating urban environments, as well as urban architecture, that reduce energy consumption. We can see this already happening, for example in forward-thinking governments placing greater emphasis on public transport over private.

There is though a further step that can be taken towards urban sustainability, which is to reduce large-scale, long-distance movement in cities and, in its place, promote local activity and shorter journeys. There are two parts to this.

First, we need to overcome the rigid separation of work place from residential place through mixed land-use planning that makes it possible to live closer to your place of employment. In the UK, this almost invariably means increasing inner-urban residential densities.

Second, we need to create a paradigm shift in highways design away from the belief that the function of major inner-urban roads is connect between places, towards an understanding that main roads are places in themselves and that they work most effectively as environmental assets when they are designed to interface local with global activity. This means the demise of the place-less trunk road and the renaissance of the urban boulevard in which walking, cycling and driving coexist.

I hope to show that many social and economic benefits can also flow from such an environmental approach; that a new form of city planning can tackle social isolation, the ghetto-structure of rapidly developing cities and the divisive effects of high-speed urban motorways; that cities designed around the promotion of interaction between different scales of movement can enhance both social interaction and economic trade which are, after all, the principal objectives of urbanity.