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Future shock - three global trends

The electrification of transport, the expansion of cycling and the move towards total mobility packages should influence our policy

► Here are three global transport trends that should be reshaping urban policy in Britain. They already are in the world's most dynamic cities in developed countries. They are transport trends - but they are about far more than that. Cities need to be smart to thrive. They need to be dynamic, enjoyable, attractive places where smart, creative people want to be and where things happen as a result. Cities are also the future - as more of the world's population becomes urban. As that population expands the challenge of climate change becomes more acute. Smart cities will be the places where the technologies and policies to tackle climate change will be found and put into practice. And smart cities need smart transport policies.

Smart grid plus smart transport = smart city

In the UK saving the planet through tackling climate change can sometimes appear to be a distant priority behind the need for measures that will promote 'growth'. Indeed action on climate change is often seen as a potential impediment to growth because many of the measures that rightly or wrongly get to wear the growth promoting badge (such as building massive roads and slashing planning regulations) could be held up by concerns about what they mean for climate change.

In Berlin things look very different. Renewables will make up half the electricity supply, and a third of total energy, including

transport, by 2030. Brandenburg (which contains Berlin) is aiming to get to 20% in seven years' time. On some days of the year it is already producing more solar and wind power than it needs. In short, Berlin will ultimately become one giant battery which can store or sell on energy when there's an excess. Where individual buildings and electric vehicles will also act as smart batteries using, generating, storing and selling back energy on the basis of sophisticated IT that can factor in generation levels, electricity prices and weather forecasts to manage these complex

interactions.

A smart grid meets smart transport because carbon-powered vehicles are on the way out. Vehicles powered in one way or another from the grid are the future. It's not just cars and buses that are going electric. Siemens will soon be trialing a system of powering lorries from overhead wires where lorries doing regular quarry or port shuttles can operate electrically, whilst still having a diesel engine for working away from the wires. There are a host of other technological options too for the electrification of transport - and it's just too early to say which will be the ultimate winners. But the trend is clear.

In Berlin this all comes together on the EUREF campus. Based on a former gas works the site brings together academia with small and large companies working on both smart grid and electric transport technologies. The campus uses on-site solar and turbine power managed by sophisticated IT to power the electric vehicles that are being developed - or that are making the transition to mainstream. And electric rental cars are starting to go mainstream in Berlin. This is all good for Germany and Berlin because it's German firms (large and small) that will benefit and Berlin as a city is where smart people will want to be to be at the centre of the fascinating, worthwhile and ultimately remunerative challenges involved in saving the world. Smart cities will want to be looking very hard at what Berlin is doing.



“Whatever is done, the long game is about providing total mobility packages”



Cycle lanes in Santa Monica

Young people want to cycle. Let them, it's good for your city

In leading developed cities around the world - from Los Angeles to Berlin and from London to New York - young people are opting out of car ownership as the be-all and end-all of transportation. They have other status symbols. They are used to rental model (phones, flats) rather than owning depreciating assets - even if they could afford it. They want to be fit and healthy. They want to be independent. They want to cycle.

Smart cities 'get it' that they should make it easier for them. Most big cities now have their cultural/creative quarters and a modern art gallery. The next level of membership of the smart cities club is to have a city centre where young people are cycling around, sitting at pavement cafes, on their smart devices, working from anywhere, making connections, creating a buzz. Cities that don't get it are blowing the cash that could have transformed cycling provision in two years on a few miles of highway schemes that will take five years and have close to zero impact on a city's overall fortunes. It's the difference between cities still pursuing a 'beige' shopping list of highway engineers' schemes from the 1970s and cities which have a vision of where they want to be in the 2020s.

Santa Monica is part of Los Angeles - the car capital of the world. In the 1920s it had some of the best public transport in the US, by the fifties Los Angeles had systematically trashed its urban transit network and built the densest network of freeways on the planet with the worst traffic congestion in the US. But even

here the same trends on cycling are emerging. Young people want to cycle and Santa Monica is helping them. Streets for cars are being transformed into streets for people. Spending on road building has been slashed and cycle use is on the up. If smart politicians are making it happen in Los Angeles...

Total mobility is nearly here, but who will be Amazon?

In the future your smart device will be the way you find the fastest route from A to B, and means of making that journey by any mode. It will unlock a hire bike, be the key for an electric rental car and your ticket to ride public transport. Who is in charge of the 'total mobility' offer will become more important than who provides the individual services. They will be the Amazon of transport. That future is not too far off now in countries like Germany and Austria. It's not here yet as making such a system pay is a challenge, and because the key players are still developing their strategies and jockeying for position. And there are a lot of players including mobile phone companies, automobile manufacturers, public sector transport authorities, private sector public transport providers, power companies and who knows - even internet giants like Google and Amazon.

In the UK at present only Transport for London has the powers and resources to be the Amazon for London. Elsewhere in the UK the danger is we get a fragmented series of sub-standard total mobility offers as neither the public or private sector has the scale, position or resource to do the job. However, if the

nettle of TfL-style control of rail and bus was to be grasped then there's no reason why the kind of total mobility offers that Vienna or Hamburg are moving towards couldn't be led by UK public sector transport authorities forging strategic, dynamic alliances with the private sector on key areas like technology and car hire.

So...

- ▶ If you want your city to look, feel and be dynamic, you've got your modern art gallery and your creative/cultural quarter - now you need to throw everything at cycling for a few years.
- ▶ It may take a while but it has begun - transport is going electric and the grid is going smart and clean. There are big opportunities for both public and private sector in cities that grasp this and act accordingly.
- ▶ Whatever is done, bear in mind that the long game is about providing total mobility packages. It is best these are rooted in where cities want to be in the 2020s rather than on the purely commercial objectives of some yet to be Amazon of mobility. Decisions now on ticketing, cycle hire schemes, rail franchising and Quality Contracts will echo down the years in terms of whether UK big cities are at the heart of total mobility - or a peripheral player. ■

ABOUT THE AUTHOR

▶ Jonathan Bray is director of the PTEG Support Unit. Before joining PTEG in 2003, his background was a mix of transport policy and transport campaigning.