



# ESSENTIAL INFRASTRUCTURE

*None of the developments discussed in this report will be possible without a robust mobile infrastructure. In a global market we risk going backwards by simply standing still and both the Government and O2 understand this with mobile featuring strongly in the National Infrastructure Plan and the opening of O2's 5G Innovation Centre in Surrey.*

*“ We're ahead of the game, we've got the benefit of the language and a trust in British culture...and it makes Britain extremely good at this stuff.*

JAMES ROPER

FRSA, CHAIRMAN & FOUNDER, IMRG – THE UK  
E-COMMERCE ASSOCIATION

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ANDREW HALDENBY  
DIRECTOR, REFORM

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## 6. Essential infrastructure

- **The global patchwork of telecommunication means that the relevance of space is diminished, but it is not dead.**
- **The increased reliance on mobile means that as new, agile businesses are increasingly footloose, decisions will increasingly depend on the mobile infrastructure of cities and nations they frequent.**
- **The UK is ideally placed to push on and lead the world in mobile but complacency will see the nation stand still as others build for a mobile future.**

The potential benefits attainable through mobile are clear: it augments the performance of not only our businesses and governments, but our homes, our towns and our cities. While Britain is ideally placed to benefit from the democratisation of information and instantaneous transfer of data that mobile facilitates, any failure to recognise the potential offered by mobile will see these same attributes work against the UK as increasingly agile businesses move more promiscuously between the locations which serve them best, and services used by a digitally engaged public will not keep up with expectations of speed, convenience and efficiency.

While developments in telecommunications have been linked to ideas such as McLuhan's Global Village and Frances Cairncross' Death of Distance, we are still some way from seeing the end of geography and until such a time cities and nations will continue to compete in order to thrive in a world that is increasingly bound up in a ubiquitous network of instant communication. In this context mobile represents a valuable resource. The rivers of Cairo and London, the harbours of Hamburg and Rotterdam and the roads of Rome all acted as part of networks which facilitated the growth of thriving cities and mobile will be no different. Much in the way failure to recognise the potential of these resources through infrastructure would have resulted in the failure to establish these global cities, failure to recognise the potential of mobile will threaten the status quo – by standing still you risk going backwards.

The need to do this is evident in the previous chapters on mobile's role in both the private and public sector, and on the implications that changes in these areas will have for individuals.

Faced with reductions in central and local budgets across almost every spending category in the UK's diverse public sector, more will need to be done with less. Connected technologies are central to this – driving efficiencies in both public access to services (for example, by allowing for remote health monitoring) and through different services ability to communicate with each other and anticipate or respond to need effectively. Fixed infrastructure is critically important to this, but the inexpensive nature of mobile, along with the current, excellent, quality of the UK's mobile network ensure it should be central to policy maker's visions of public services in the future.

In the private sector businesses are acutely aware of the value of mobile to their organisation's present and future. As we have discussed earlier in this report, 45% of business leaders surveyed state that mobile has already had a transformative impact on their business. Across businesses of all sizes – large, medium, small and micro – mobile connectivity is enabling the internet's fundamental benefit; democratising access to information.

Beyond the continuing, transformative impact of mobile on Britain's businesses and services there is also much encouragement to be taken from the nation's position globally. One essential element of this advantage is the quality of the UK's existing infrastructure, which has, among other benefits, allowed mobile network operators to deliver 4G connectivity at faster speeds than many other nations.

*“The speeds you get on our 4G network in its totality – across all providers – are far greater in the UK than in most parts of Western Europe”*

**STEVE NORRIS, MANAGING PARTNER - CRIMINAL JUSTICE & EMERGENCY SERVICES AT TELEFÓNICA UK**

Despite this, the profile of mobile infrastructure remains relatively low, and part of the problem involves establishing what we talk about when we talk about infrastructure. In many cases, infrastructure is associated with physical networks – road, rail, water and electricity – and less with something less tangible like mobile connectivity.

*“I think people do traditionally think of those big civil engineering things like HS2 [when they think of infrastructure] and so on, new motorways etc. which are absolutely important, but the hidden one, I think, is how we're connecting up the cities and the towns and the villages with mobile broadband technology, which is perhaps often overlooked”*

**ANDY CONWAY, HEAD OF NETWORK STRATEGY, PROGRAMMES & OSS AT TELEFÓNICA UK**

*“In the political debate when people say infrastructure they mean transport infrastructure, ... they then have to be reminded that that includes broadband, that includes mobile... it's transparently obvious that [mobile] infrastructure is absolutely essential for the modern economy, but it just doesn't have the profile that other bits of infrastructure do”*

**ANDREW HALDENBY, DIRECTOR, REFORM**

As stated by Andrew Haldenby in the quote above, mobile is essential. While the profile of mobile infrastructure may be low with regards to the electorate, it's essentially not diminished by this fact. Despite a low profile in relation to more traditional infrastructural projects, there is enormous opportunity to develop, and awareness of the value of the mobile economy is central to this evolution. Understanding the primary role that mobile plays in, for example, democratising access to information or developing new businesses (such as those building on the sharing economy) is as essential to the future of work and public service delivery as it is to the fundamentals of societal communication.

*“The internet has had, in business and society, one fundamental impact from which most of the rest of the impacts derive, and that's democratisation of access to information, and information in near real-time”*

**RONAN DUNNE, CHIEF EXECUTIVE OFFICER OF TELEFONICA UK (O2) AND MEMBER OF TELEFONICA SA'S EXECUTIVE COMMITTEE**

At national level government agencies are well aware of the current and future value of mobile to both businesses and the public sector. In 2014 the UK Commission for Employment and Skills suggested in its Future of Work report that the proliferation of smartphones is enabling ‘ubiquitous communication and access to information’ with one major implication being the need for data management and analytics. The report also highlights the role mobile plays in both modernising existing processes, replacing low skilled jobs, and in creating new ones. Additionally, the Department for Business, Innovation and Skills commissioned a report last year into the benefits of the sharing economy (Unlocking the Sharing Economy), illustrating an appetite at political level to understand the contribution new economies and models can make to the UK.

More prominently, the value of mobile infrastructure has been underlined in the National Infrastructure plan, published by the Treasury in December 2014. The report emphasises the ability of digital infrastructure to allow people access to information, services and the wider world. Alongside Superfast Broadband and Super-Connected Cities, the Mobile Infrastructure Project and the Commercial 4G Rollout were included as among the Government’s priority investments in the period to 2020.

Though in many ways the UK has lagged behind global competitors, particularly in the Far-East, 4G coverage in the UK is now far faster than in the majority of Western Europe. The reasons for the delay are largely found in regulation and the availability of spectrum, issues which have been addressed by government in order to allow mobile to flourish. These measures, together with the establishment of O2’s 5G innovation centre in Surrey mean that the UK, and O2 as a leading mobile provider in the UK market, are uniquely positioned to lead the world in development of 5G.

*“The 5G innovation centre in Surrey is now established, it’s built, it’s working, and I think that’s going to enable us to be able to be leading the world again with the development of the 5G standard”*

**STEVE NORRIS, MANAGING PARTNER - CRIMINAL JUSTICE & EMERGENCY SERVICES AT TELEFÓNICA UK**

Of course it is not simply the UK’s existing mobile infrastructure that makes us a global leader. Another contributing factor to the UK’s global position is the UK’s reputation and the English language’s status as a lingua franca around the world. This, in tandem with trust in British culture puts the UK in an ideal position from which to build towards both universal 4G coverage, 5G networks, and beyond.

*“We’re ahead of the game, we’ve got the benefit of language and a trust in British culture and we’ve all sorts of other things and it makes Britain extremely good at this stuff.”*

**JAMES ROPER FRSA, CHAIRMAN & FOUNDER, IMRG – THE UK E-COMMERCE ASSOCIATION**

The UK is positioned extremely strongly to thrive in a mobile-driven Connected Economy. As we started the chapter by stating, however, to stand still is to go backwards in an economy in which competition is global. 88% of those surveyed believe that the mobile journey has only just begun and this sentiment can be applied to the UK’s mobile infrastructure. Mobile’s potential for business and governance is limitless but the UK’s role as a mobile pioneer can only be made concrete by the continued recognition of mobile as essential infrastructure.