

IV. Investment in infrastructure⁴

Why infrastructure matters

Investments in infrastructure, such as transport, energy, telecoms and housing, are essential inputs into economic growth. They are complementary to many other forms of investment. They also tend to be large-scale and long-term, requiring high levels of coordination to maximise the wider benefits that they offer. This makes it inevitable that governments will play a vital role in planning, delivering and (to some extent) financing such projects.

Diagnosis: the problems of infrastructure in the UK

In the 2012 World Economic Forum report on global competitiveness, the UK was ranked only 24th for 'quality of overall infrastructure'. In a 2011 infrastructure survey by the Confederation of British Industry, nearly half the respondents rated the UK's transport networks as well below average by international standards. Nowhere is the problem of UK infrastructure better illustrated than by airport capacity in the South East, where generations of politicians have prevaricated to a point where there is serious risk to London's position as a major hub.

Improving infrastructure requires a radical change in how to initiate, decide and implement policy in a much more coherent way. Historically, attempts to overcome market failures in infrastructure investment have led to a mixture of government ownership and provision on the one hand and private sector regulation on the other. This, in turn, has exposed infrastructure investment to important policy risks and decision-making biases that damage investment prospects.

“Nowhere is the problem of UK infrastructure better illustrated than by airport capacity in the South East, where generations of politicians have prevaricated to a point where there is serious risk to London's position as a major hub.”

Among the key problems that need addressing in relation to all areas of infrastructure are:

- Vulnerability to policy instability – a lack of clarity about strategy, frequent reversals and prevarication over key decisions. For example, it has taken 12 years of reviews, white papers and some legislation for government to come forward with a substantial set of energy policy reforms (the most recent being the 2012 Energy Bill).
- Difficulty in basing decisions on sound advice and assessment of policy alternatives built on unbiased appraisals (as opposed to lobbyists).
- The limitations of a planning system that does not properly share the benefits of development from implementing strategy and tackling problems. This has created chronic NIMBYism (local resistance to new developments on the grounds of 'not in my backyard') because of the incentives for small groups of influential citizens and politicians to veto or cause egregious delay to projects with wide economic benefits.
- A series of public sector accounting distortions that have made it difficult to weigh up benefits and costs in a coherent way. In particular, targets for fiscal policy often draw on measures of public debt while failing to account for the value (and depreciation) of public assets.

These problems affect all major public sector capital projects to some degree, but they vary in their severity. The consequences for long-term growth and patterns of development in the UK also vary. We focus mainly on transport and energy where the problems are well-understood and where the potential damage to growth is likely to be more severe. But we also briefly discuss housing and telecoms.

Transport

Transport needs to adapt to a growing population and changing needs in different parts of the country. Underinvestment and inadequate maintenance characterise the provision of roads, railways and airports. There are particular inefficiencies in how transport is priced and how decisions are made and financed. The 2006 Eddington Review⁵ cited a potential cost of £22 billion per annum in increased congestion by 2025 if the transport network does not keep up with demand.

⁴ For a more detailed discussion please see [lse.ac.uk/researchAndExpertise/units/growthCommission/documents/pdf/SecretariatPapers/Infrastructure.pdf](https://www.lse.ac.uk/researchAndExpertise/units/growthCommission/documents/pdf/SecretariatPapers/Infrastructure.pdf)

⁵ The Eddington Review was commendable in that it (i) looked at a clear, credible forward-thinking framework; (ii) tackled the problems and bottlenecks in terms of their severity and economic and social returns; and (iii) drew on strong academic advice. The fact that it got 'buried' illustrates the problem with UK policy-making and the inadequacies of the one-off review approach.

The UK lacks a long-term strategic vision based on coherent and transparent criteria.

In terms of usage and economic importance, the **road** network is the most important means of transport. It provides three quarters of passenger travel and two thirds of freight. UK road congestion is among the worst in Europe, particularly in urban areas, reflecting inadequate investment over several decades. Responsibility for maintaining, operating and improving the network of national roads resides with the Highways Agency, but the remainder of the network is the responsibility of local authorities. This fragmentation means that there is a lack of long-term, strategic thinking. While the government has established a systematic process of five-year plans for railways with an associated funding commitment, there is nothing comparable for roads.

The **aviation** sector suffers from constrained airport capacity, particularly hub runway capacity in the South East. UK international gateways have some of the worst delays in Europe: a quarter of Heathrow and Gatwick flights are delayed for over 15 minutes. Both Heathrow and Gatwick are operating at near full runway utilisation. Given that the UK has a comparative advantage in international business services where face-to-face relationships are vital, failure to deal with these issues demonstrates remarkable complacency.

Longstanding failings are also apparent in the management and operation of **railways**. These include a poor reliability record by international standards. There is still insufficient emphasis on implementing long-term plans to reduce carbon intensity or on alleviating problems of passenger crowding at peak times, especially in the South East. Persistent problems with high costs have also not been confronted adequately. We have committed to long-term funding of rail projects with relatively low benefits in relation to their costs in preference to investment in roads where the benefits are unambiguously greater.

Energy

In common with other OECD countries, the UK faces significant challenges in trying to achieve a balance of *security*, *stability* and *affordability* in energy supply, while at the same time complying with relatively stringent *carbon targets*.

Successive UK governments have failed to deliver stable, credible long-term policy/regulatory environments that are capable of attracting private investment in the scale and manner required to meet these challenges. Investors see policy as unstable because of either *ad hoc* tinkering or major changes in political objectives. For example, uncertainty about the level of subsidy for wind projects means

that businesses have lacked long-term clarity on the basis of which to invest. Similarly, in the last decade, North Sea operators have experienced four major changes to the taxes they have had to pay. These changes create inefficiencies, as a windfall tax in one year's budget is followed by tax breaks in a subsequent budget.

This has all occurred against a background where more than a fifth of UK's electricity-generating capacity will have gone out of commission within the next ten years. Ofgem, the regulator of the energy sector, has warned there could be an imminent drop in spare electricity capacity from a margin of 14 per cent at present to just 4 per cent by 2015 (Ofgem, 2012).

The [Electricity Market Reform](#) is geared towards providing a framework for investment. But it will take time to build confidence, which has been dented by constant internal bickering in government resulting in revisions to the framework every few years. The current policy framework assumes big increases in future gas and oil prices, which may turn out to be wrong. Technological change is making substitution between different sources of energy easier and creating new sources of energy and new ways of storing it. Revolutionary changes are being brought about by unconventional gas production. In the US, gas production from tight formations such as shale and coal ('fracking') has provided the country with enough gas to meet



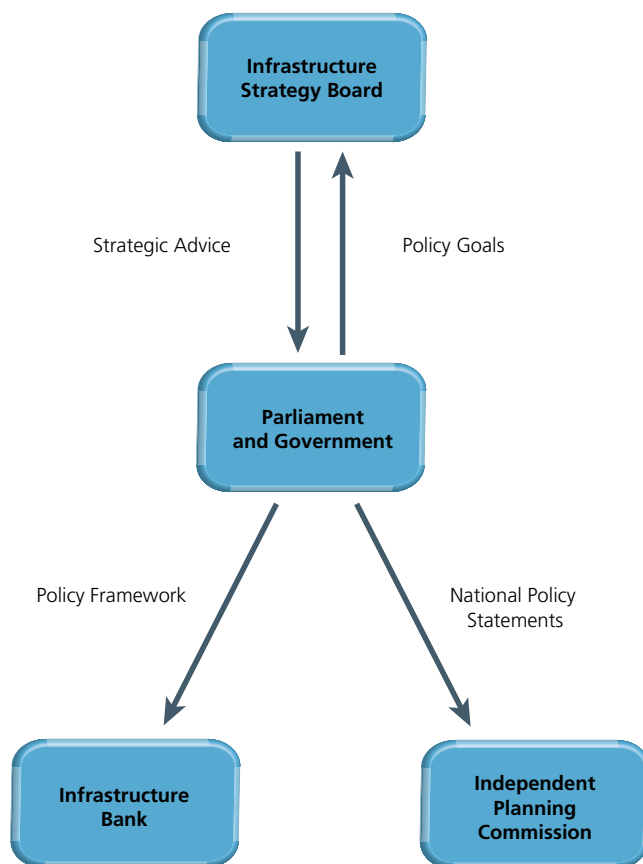
domestic electricity demand for over 500 years at current levels. If other countries succeed in commercialising these reserves in the same way as the US has, then gas will fundamentally change the way we think about resource scarcity and will provide a cheap, abundant and cleaner fossil fuel to pave the way to a low-carbon economy.

Such changes put a premium on flexibility and diversity of supply rather than becoming locked into a limited number of energy sources. They also mean that plans to reduce greenhouse gas emissions should be developed in a timely way, establishing a predictable framework that can take account of potential changes in markets and technologies.

Core recommendations on infrastructure

The persistent failure of infrastructure policy in the UK requires a new approach. Our main proposal is for a new institutional architecture to govern infrastructure strategy, delivery and finance. A set of complementary institutions is illustrated in Figure 8.

Figure 8: The new institutional architecture for infrastructure



Our proposal has three core institutions:

- An *Infrastructure Strategy Board* (ISB) to provide the strategic vision in all areas: its key function would be to provide independent expert advice on infrastructure issues. It would lay the foundation for a well-informed, cross-party consensus to underpin stable long-term policy. The ISB would support evidence-gathering from experts and operate through transparent and wide-ranging public consultations, engaging interested parties and members of the public in the debate over the costs and benefits of policy options. The ISB would obtain its authority from and be accountable to parliament. Its mandate would be laid down by statute. As a standing body, it would produce regular reports on infrastructure needs and long-term priorities and challenges. The ISB would be governed by a high profile, independent management board, which would be directly accountable to and appointed by parliament.



- An *Infrastructure Planning Commission* (IPC), which would be charged with delivering on the ISB's strategic priorities. This body existed in the recent past. It has now been replaced by the Infrastructure Planning Unit under the auspices of the Department for Communities and Local Government. This change reintroduced ministerial approval for projects and we believe that independence from ministerial decision-making should be restored. The IPC is designed to give predictability and effectiveness to (mostly private) investment that drives implementation of strategy. It must not be misunderstood as a 'central planner'.
- An *Infrastructure Bank* (IB) to facilitate the provision of stable, long-term, predictable, mostly private sector finance for infrastructure. There are good theoretical reasons for the creation of such a bank: it can help to overcome key market failures in capital markets in a direct and constructive way. In particular, it can help to reduce policy risk and, through partnerships, to structure finance in a way that mitigates and shares risk efficiently. This will require a whole range of financial instruments including equity and structured guarantees. There are good practical examples that show the advantages of a bank with this sort of mandate, such as Brazil's BNDES, Germany's KfW, the European Bank for Reconstruction and Development and to some extent the European Investment Bank. The IB would develop banking and sector-specific skills in new and important areas. It would use its special ability to make investments that could then provide powerful examples with catalytic effects on private investment through its partnerships. It could have a very strong multiplicative impact so that its investments have effects much larger than the amount of capital it puts in. The IB would be governed by an independent board with a clearly defined mandate and access to capital markets. Further details are available at [lse.ac.uk/researchAndExpertise/units/growthCommission/documents/pdf/SecretariatPapers/BInfrastructure.pdf](https://www.lse.ac.uk/researchAndExpertise/units/growthCommission/documents/pdf/SecretariatPapers/BInfrastructure.pdf).
- We need to institute *generous compensation schemes* to extend the benefits of infrastructure projects to those who might otherwise stand to lose, either due to disruption caused by the construction phase or by the long-term impact on land and/or property values. The principle is to share the broad value that the implementation of the national strategy will bring. Such compensation schemes should be enshrined in law and built into the thinking of the ISB and the operations of the IPC. At present, the UK does not provide adequate compensation for individuals who bear the costs of development. This contrasts with other countries, where mandatory compensation due, for

example, to noise, travel or other disruptions is commonplace. The UK's problem arises partly because the level of compensation is low and partly because existing compensation schemes are primarily communal. Both communal and individual schemes are necessary.

Our proposed infrastructure institutions would facilitate long-term planning and reduce policy instability in the planning, delivery and financing of an infrastructure strategy for the UK. The new institutional architecture would allow government to choose its priorities and decide on strategy. But crucially, it would ensure that political decisions are taken in the right place; that they do not expand to aspects of strategy and/or implementation where they add little value and can be a costly source of instability (for example, planning); and that they represent credible commitments for current and prospective investors. In addition, the new framework would support a political debate informed by rigorous, independent assessment of policy alternatives, fostering the formation of cross-party consensus where possible, making political procrastination harder and thus generally improving the quality of policy-making.

The projects considered by the Infrastructure Strategy Board, delivered by the Infrastructure Planning Commission and financed by the Infrastructure Bank would be those of greatest national priority, such as ones in roads, aviation and energy. But the programme of work could also be responsive to large-scale regional project infrastructure proposals from outside parliament. For example, local enterprise partnerships (collaborations of businesses, local authorities and other groups in an economically meaningful unit) may put together a bid for building a cluster of science parks, which would involve many outlays on transport, buildings, energy and telecoms supplies.

Allowing such sub-national bids would ensure a more bottom-up approach to major regional projects that involve strategic thinking. This would help to use more local initiative and decentralised information than would be available at a national level. The abolition of Regional Development Agencies and regional offices has left a strategic

“The persistent failure of infrastructure policy in the UK requires a new approach. We propose a new architecture to govern infrastructure strategy, delivery and finance.”

planning vacuum between the national level and the very micro-level (districts). Indeed, the institutions that support regional economic development in England are a classic example of policy instability, being the subject of numerous reforms, often with radical policy swings following national elections.

An example of how our infrastructure proposals would help the impasse over the shortfall in runway capacity in the South East.

The Infrastructure Strategy Board would be a permanent, dedicated source of independent and analytically robust advice that would help to align political views. If it had existed now, it would have avoided the need to set up the Davies Commission to investigate the problem again from scratch. The expansion of Heathrow has already been discussed by [numerous](#) other inquiries (for example, the 1968 Roskill Commission). Rigorous information about the costs and benefits of different policy options would have been available from a team of experts long immersed in the strengths and weaknesses of the existing evidence.

The Infrastructure Planning Commission would operate under the same rules as currently used in National Policy Statements. It would ensure that planning is not used to re-open political debates each step of the way while implementing policy. The Infrastructure Planning Commission would deal with the ensuing planning practicalities, namely reviewing and deciding on specific applications for development consent. It would also decide about compensating those who stood to lose from the expansion of an existing airport or the building of a new one, following a set of clear rules enshrined in law. This would help to mitigate political bickering and deliver transparent and predictable planning decisions.

Other policies to support infrastructure

Public investment should not be hamstrung by accounting methods that impede a focus on economic returns. Therefore, for fiscal targets to be useful as a strategic management tool, they should incorporate the value of public sector assets rather than concentrating solely on public sector debt. Otherwise there is no distinction between extra borrowing to finance consumption and borrowing to finance investment in new assets or to repair the condition of existing assets. The failure to use proper public accounting methods makes public investment – for example, in road maintenance – look artificially expensive and hampers good decision-making. It is like judging a firm solely on the profit and loss account while ignoring the balance sheet. The UK is leading efforts in improving **public sector accounts** (for example, through the publication of *Whole of Government Accounts*). It is time for government to use these new accounts as the basis for policy-making.

Road pricing is an idea whose time has come. There are no major technological impediments to a system that would manage congestion, be fairer and improve incentives for building and maintenance. To the extent that there are political impediments with moving to comprehensive road pricing, these can be overcome in the longer term. A new regulator should administer the system following a regulatory asset base model, an approach that has proved to be successful in other areas of infrastructure. By creating dedicated revenue streams, this would help to provide a long-term solution to the problem of road investment, maintenance and finance. Road pricing could be made attractive to the electorate by accompanying its introduction with a cut in fuel duty as a large component of the tax is currently rationalised by the need to limit congestion. In some circumstances, national roads (operated by the Highways Agency) could be auctioned off and shadow tolls introduced in this section of the road network.

The under-supply of **housing**, especially in high-growth areas of the country has pushed up house prices. The UK has been incapable of building enough houses to keep up with growing demand. Many of the long-term issues of strategic planning and delivery that we have highlighted apply equally to housing investment even though most of the investment is undertaken by private business. The ISB and IPC should also take responsibility for long-term strategy and delivery of housing throughout the UK where this is naturally complementary with infrastructure goals. Schemes to increase the amount of land available for development need to overcome local resistance. Institutionalising a flexible system of compensation for those who stand to lose from new developments is important, for example, via funding local amenities, reductions in council tax payments or straightforward cash. Appropriately generous compensation schemes should, in particular, help to diminish local opposition to development.

With regards to telecoms, **broadband** plays an increasingly important role in connectivity. But the UK's broadband infrastructure is not outstanding compared with other countries. The UK ranks typically in the middle of the table in terms of raw broadband performance and deployment, including broadband speed and network coverage. But compared with other advanced economies, we tend to spend more time online, buy more online and the value added generated by internet-related activities represents a larger share of GDP than in almost any other country (OECD, 2012b). To continue taking advantage of the extraordinary opportunities that the internet offers, we must continue to be prepared to respond flexibly and promptly to a rapidly changing technological environment. Again, the institutional architecture we propose could help with problems here as they arise.

Why have problems with infrastructure persisted?

There is nothing new in recognising that poor infrastructure is a major UK problem with detrimental consequences for growth. The policy thrust has been away from investment programmes driven by the government because of a suspicion that such projects offer low efficiency and poor value for money. This is understandable and similar infrastructure problems exist in the even more free market US. It must be recognised, however, that infrastructure inevitably requires a long-term government strategy.

In the 1930s and 1940s, infrastructure investments were largely made in the private sector. The private sector then came to be widely regarded as taking too short-term a view; its investment record was considered insufficient and so it was forced to give way to government. Privatisation in the early 1980s came about while important shifts in the economy were taking place, including economic activity moving from large energy-intensive industries towards services. In addition, the assets built by the public sector in the 1960s and 1970s were still far from the end of their lifecycle. The result was that the need for policy frameworks that provide stability to investors was largely overlooked and the lessons of the 1930s and 1940s were forgotten.

Although procrastination is possible for long periods of time as these are long-lived investments, it is clear now that these problems can no longer be avoided as the existing infrastructure grinds to a halt.

The adversarial nature of UK politics means that we have a great deal of policy 'flip-flopping'. In some areas, the costs of such policy instability do not matter too much. But in areas that require investments for the long run – infrastructure (as well as skills and innovation) – political uncertainty is extremely costly.

Summary on infrastructure

We propose a new institutional architecture for infrastructure to provide better strategy, delivery and funding of major infrastructure in transport and energy. Together, the Infrastructure Strategy Board, the Infrastructure Planning Commission and the Infrastructure Bank will unblock projects and share the gains from development. We believe that this will dramatically reduce the policy instability that has led the UK's infrastructure to be poor in comparison with other countries and which is holding back growth.

“Together, the Infrastructure Strategy Board, the Infrastructure Planning Commission and the Infrastructure Bank will unblock projects and share the gains from development.”