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Delivering our Strategic Networks

A Department for Infrastructure

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Foreword

Delivering large scale infrastructure projects has always been a challenge, particularly for politicians who, for obvious reasons, view the world through five-year cycles. There are too many examples to list of projects which have been sacrificed as new governments have come in and sought to cut costs, pursue alternative policies, and invest in projects they themselves might get to open.

I am happy to see that this attitude is shifting and we have seen much good work done in recent years to abolish this stop-start culture of investment. Construction of infrastructure has rightly been identified as one way to boost the economy in the short and long term, through jobs created, increased global competitiveness resulting in more Foreign Direct Investment, and better ability to conduct business.

This will be music to the ears of those involved in designing and building our transport, utilities, and communications networks. Increased certainty will allow them to invest with confidence in their workforces, facilities, and technology. Cost savings will also be possible as the need to keep gearing up and down as work varies evaporates.

We must be ambitious, however, not rest on our laurels, and continue to seek to improve. That is why, working with the support of ACE, I have put together this proposal for a new Department for Infrastructure that will plan and oversee the delivery of the new strategic networks the UK needs. Whilst politicians advocating institutional reform is often a turnoff , in this case it could drive a step change in delivery and hence economic performance.

This is very much a hot topic for debate right now, with the Armitt Commission offering a National Infrastructure Commission as the solution. My own view is that, while this is seeking answers to the right questions, what is proposed will not accomplish the ends to which it aspires. The time it would take to deliver, in the first place and in terms of subsequent National Infrastructure Assessments, as well as the uncertain politics behind it all, make this an incomplete solution.

Streamlined and working within a new DfI, however, a NIC could provide the rigorous analysis that restores confidence to government pronouncements on infrastructure needs. A DfI could then set about devising a strategy and implementing policies that would demonstrably follow from a strong position that would also engender greater cross-party consensus.

In the end, this is what will lead to faster, more effective delivery, a more strategic approach to provision, and the interconnections between our infrastructure networks that will see us lead the world again.

Stephen Hammond MP
ACE Advisory Board & Member of Parliament for Wimbledon

Executive Summary

The essential basis of all strong, prosperous and modern economies is effective and efficient infrastructure. Our Victorian ancestors understood this as they presided over an industrial revolution that was based on the creation of a new infrastructure network that allowed for the accelerated movement of goods and services around the country and to the rest of the world. Today we face challenges from a growing population, a challenging world economic backdrop, an evolving economy and technologies, and changing environmental landscape that require us to invest, update and build a new infrastructure network fit for the modern world.

However, it has become increasingly clear that this level of investment in the UK's infrastructure has not been renewed or enhanced to the level or at the speed it requires. This is impacting on the UK's economic performance with the World Economic Forum ranking the UK 27th for the overall quality of infrastructure in its report on global competitiveness despite the fact that the UK has the world's 5th largest economy. In a world of increasing competition and globalisation this position cannot long continue without impacting on the UK's overall prosperity.

Whilst we applaud the National Infrastructure Plan, pressures are already evident. The plan states that £463 billion of spending is needed on infrastructure in the coming decades. All of this is widely accepted across the political divide however the UK is still struggling to deliver the necessary investment.

The principal obstacles identified as hindering long term investment in the UK are:

- **Lack of long term strategic planning:** successive governments have failed to set strategic priorities for infrastructure and have instead chosen to sweat the network. Governmental structures ensure long term decisions are taken in ministerial silos with little understanding of the interdependence between sectors. There is little evidence based assessment of need with a corresponding lack of public engagement with the issue.
- **Policy uncertainty:** major infrastructure projects are often highly controversial and so confront politicians with political risk with little corresponding reward due to the long time scales of projects. The lack of strategic planning also makes it difficult to develop cross-party consensus around these projects.
- **Lack of transparency around funding:** successive debates around key projects has revolved around who pays for the infrastructure as the delivery landscape is now complex. Governments have been wary of making long term commitments to increase either public expenses or user charges and so projects are delayed.
- **Length of the planning process:** delay has also been caused by governmental decisions to use the planning system to decide policy issues rather than having the responsible minster make them. A prime example of this is Heathrow expansion.
- **Limitation of regulation:** the regulation of privatised industries has created an environment of short term priorities around efficiency and consumer protection.

A fully-fledged Department for Infrastructure (DfI) would solve these issues and ensure the UK develops the infrastructure network it needs. Focusing on the development of strategic economic infrastructure supported by Infrastructure UK (IUK) and a new National Infrastructure Commission (NIC), the department would provide the long term planning, policy certainty and funding stability that the UK needs.

The challenge to our nation is clear. We must show ourselves as committed and innovative as our Victorian ancestors, who built much of our infrastructure network. If the UK is to continue to compete in the world it must have a strong economy based on an effective and efficient infrastructure network.

Introduction

The general debate over the importance of infrastructure is over. All political parties now acknowledge its role in keeping the country running. We need power to operate our offices, factories, and homes; transport connectivity to move goods and people around; and good communications to facilitate the conduct of business and social interaction.

Recent governments have accepted that investment and development of our infrastructure is a core component of any successful policy to promote economic growth and competitiveness. The effects of recessions are mitigated in the short-term as investment creates jobs, while the long-term benefits of a more attractive and robust business environment will ensure more sustainable growth for the future.

It has been argued that the UK spends less on transport and development as a percentage of economic output than any other OECD country. Indeed, the UK is ranked 27th in the world in terms of infrastructure quality, behind the UAE and Malaysia, despite having the 5th largest economy.[1]

In addition, France is estimated to have a 20 per cent higher productivity level than Britain despite having less flexible labour markets. This is predominantly due to better infrastructure provision.[2] It is hard to quantify the economic impact of this acute infrastructure investment but without doubt it has a critical constraining impact on our future growth trajectory.[3] For example, ACE estimates that by the end of this decade road inefficiencies could cause England alone to suffer a cumulative loss of £97bn.[4]

While the need for infrastructure is agreed upon, however, there is still much debate about the exact nature of the projects that will achieve this. Do we really need airport expansion, or a new high speed rail line? Should government and industry focus on delivering the fastest possible broadband for our major cities or ensure a good standard throughout the whole country? Should energy generation focus on nuclear, renewable, or gas-fired solutions?

It has also been suggested that, in the next decade, the UK will need to replace one-third of its energy generation capacity due to increased demand and existing stations coming to the end of their life span.

According to the National Infrastructure Plan, the UK will require spending of around £463bn on infrastructure in the coming decades.

This aggregated amount is broken down as follows:

- Energy £279 billion;
- Transport £142 billion;
- Communications £11 billion;
- Water £31 billion;
- Total UK infrastructure deficit of £463 billion.[5]

This amounts to approximately one-third of annual UK GDP. The consequences of not investing will be the gradual erosion of the UK's competitive advantage and living standards – which will be especially pronounced as the economic centre of gravity shifts east and emerging nations invest trillions in new infrastructure systems.

1. World Economic Forum, Global Competitiveness Report 2014-15
2. Helm, D, Wardlaw, J & Caldecott B, 2009, Delivering a 21st Century infrastructure for Britain, Policy Exchange
3. Grimes, A, 2003, Economic growth and the size and structure of government: Implications for New Zealand, Motu Economic and Public Policy Research Trust and department of Economics, University of Waikato Motu, Working Paper 03-10
4. Association for Consultancy and Engineering 2013, Funding Roads
5. HM Treasury, National Infrastructure Plan 2014

These questions, and others, have led to attempts by government to take a more strategic approach to infrastructure development, through the likes of the National Infrastructure Plan, National Policy Statements, and extended funding cycles for the likes of Transport for London (TfL), Network Rail, and Highways England. These are welcome policy solutions, and do represent a positive step by this government. The reality is there is still a need for a more structured and informed approach to infrastructure development and delivery.

One solution to this problem that has been proposed recently by Sir John Armitt is that of a NIC, a body that is designed to provide clear objectives for infrastructure delivery based on evidence-based assessment of the UK's long-term needs. Some concerns have been expressed, for instance, about the lengths of time associated with the process proposed that the NIC must go through, however. This paper will look into the question of whether this goes far enough and examine if the time is right for a fully-fledged DfI at the heart of Whitehall and government.

Overview of the current difficulties

Since the end of the Second World War successive governments have failed to set strategic priorities or provide long-term leadership for investment in the UK infrastructure network. The post war economic weakness of the country combined with the command and control ethos at the heart of post war governmental thinking created a context in which highly centralised projects were combined with short term crisis management that prevented the development of long term strategies to meet the UK economic requirements. The results of this can be seen in the poor economic performance of the UK compared to its European rivals in the post war period.

By the beginning of the 1980s privatisation and deregulation began to be seen as a way of solving these systemic problems in the UK economy and there was widespread acceptance of the need to de-couple the economy from direct governmental management. The UK faces a unique situation caused by this move to privatisation in that around 60% of key economic infrastructure is now held in private hands which is twice that of the second most privatised economy, Australia, that has only 30% of its infrastructure in private hands. Although this has led to an overall improvement in the growth and stability of the UK economy it did so at the expense of certainty with increased fragmentation across the infrastructure network particularly in water and energy where the lines of accountability have become increasingly blurred.

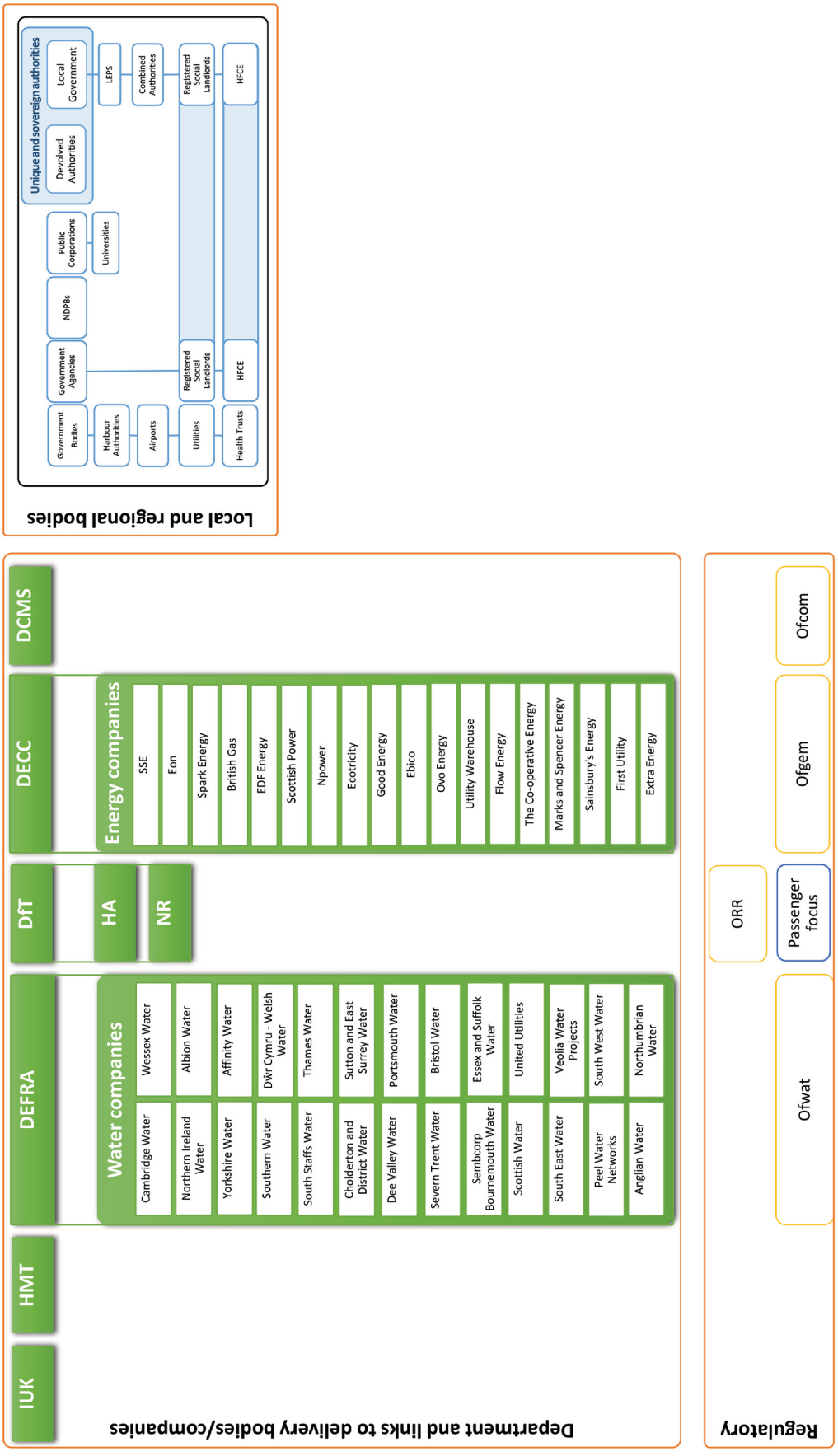
The increased participation of private sector companies in the management and delivery of sections of the infrastructure network has increased the difficulties for government to build a long term assessment of the UK's infrastructure needs. As one of the respondents to the Armitt Review stated, "…at present, no single body in the UK takes a view of what the picture on the front of the jigsaw box looks like. Rather we hope it comes together, mainly by chance, via the work of a number of separate parties such as investors, regulators and Government."[6]

We have seen the outcome of this tendency in recent years with the amount of time it took for the Crossrail project to finally begin in London, the recent indecision around south east runway capacity and the lack of any new motorways since the M40 was completed in the early 1990s.

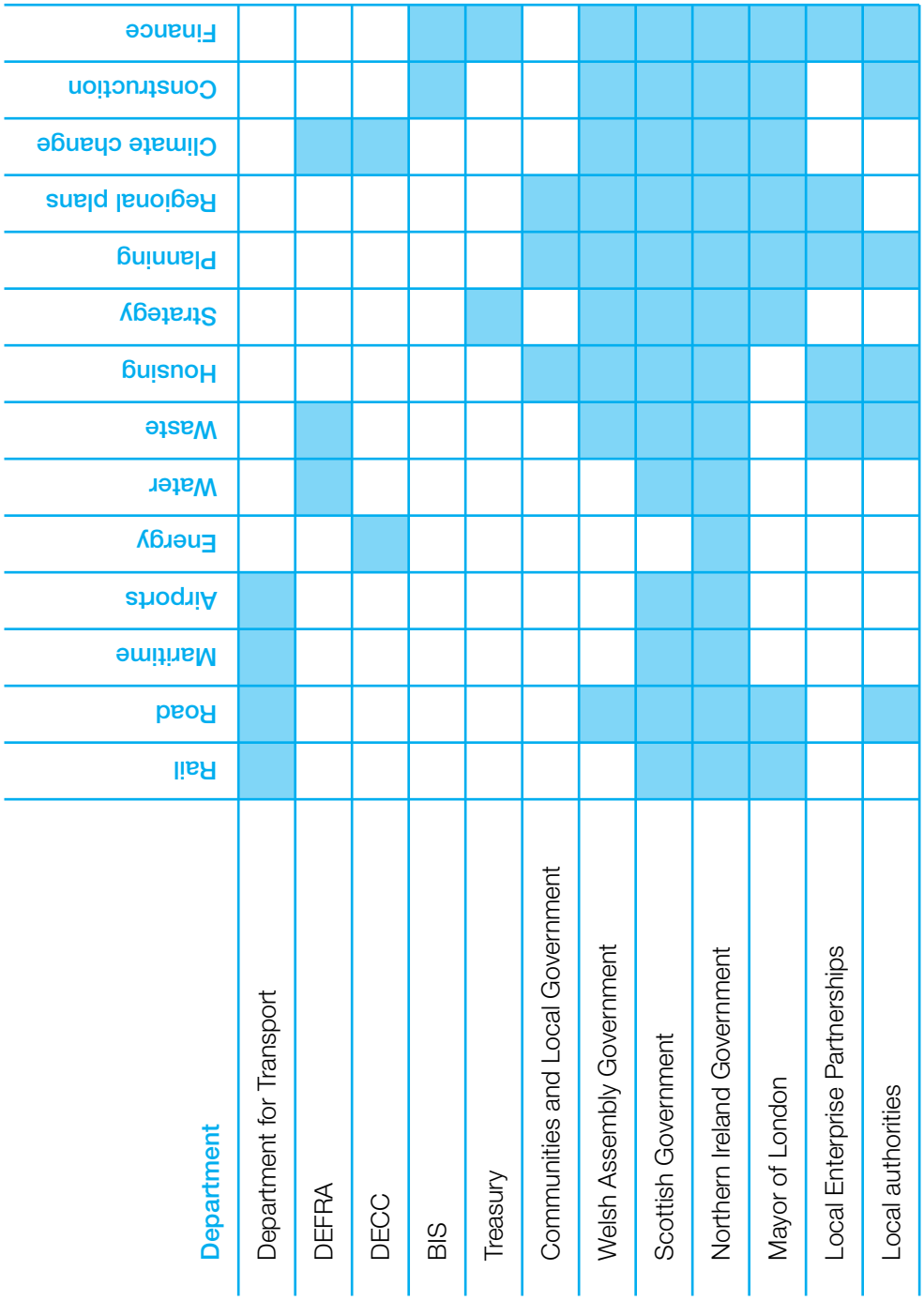
Alongside this there has been a tendency within Whitehall towards bureaucratisation within ministerial departments and taking decisions inside silos with no overall body responsible for the coordination of the UK's infrastructure.

6. The Armitt Review 2014, p. 3

Context


Local and regional bodies
Unique and sovereign authorities
Local Government
Devolved Authorities
LEPS
Combined Authorities
Registered Social Landlords
HFCE
Public Corporations
Universities
NDPBs
Government Agencies
Registered Social Landlords
HFCE
Government Bodies
Harbour Authorities
Airports
Utilities
Health Trusts
Department and links to delivery bodies/companies
IUK
HMT
DEFRA
DfT
HA
NR
DECC
DCMS
Water companies
Cambridge Water
Northern Ireland Water
Yorkshire Water
Southern Water
South Staffs Water
Cholderton and District Water
Dee Valley Water
Severn Trent Water
Sembcorp Bournemouth Water
Scottish Water
South East Water
Peel Water Networks
Anglian Water
Wessex Water
Albion Water
Affinity Water
Dŵr Cymru - Welsh Water
Thames Water
Sutton and East Surrey Water
Portsmouth Water
Bristol Water
Essex and Suffolk Water
United Utilities
Veolia Water Projects
South West Water
Northumbrian Water
Energy companies
SSE
Eon
Spark Energy
British Gas
EDF Energy
Scottish Power
Npower
Ecotricity
Good Energy
Ebico
Ovo Energy
Utility Warehouse
Flow Energy
The Co-operative Energy
Marks and Spencer Energy
Sainsbury's Energy
First Utility
Extra Energy
Regulatory
Ofwat
ORR
Passenger focus
Ofgem
Ofcom

This confusing tapestry of responsibility is mirrored in the division of governmental responsibilities across Whitehall departments. This is the key issue, that the organisations that are meant to be giving strategic direction to infrastructure policy within government are too disparate. In terms of the UK's economic infrastructure, HM Treasury (HMT) and Infrastructure UK (IUK), the Departments for Transport (DfT), Energy and Climate Change (DECC), Environment, Food, and Rural Affairs (DEFRA), and Culture, Media, and Sport (DCMS), the regulators (Ofgem, Ofwat, Ofcom, the Office of Rail Regulation), the National Governments in Edinburgh, Cardiff, and Belfast, and local authorities, of which there are around 450 in England alone all have a role in policy formulation, development, and delivery.



This fragmented landscape is not helpful when it comes to delivering any form of policy, but particularly strategically important economic infrastructure. Various parts of the UK suffer from the inability to access a fast broadband internet connection, something taken for granted in areas. It is now over a decade since the 2003 Aviation White Paper identified the need for further runway capacity in the South East, a recommendation the ongoing Davies Commission is set to repeat. And while energy demand is on the rise, we are only now getting around to building the new generation of nuclear power plants that are supposed to replace those that are being decommissioned over the next decade.

The blame for all these inconsistencies and delays can, at least partially, be laid at the feet of the sheer number of organisations that have stakes in the development and delivery of the various infrastructure projects. Overlapping processes, responsibilities, and democratic mandates all make for a hugely uncertain path from project conception to delivery.

All of this has implications throughout the engineering sector, the economy, and wider society as a whole. Uncertainty around whether a project will actually get the go ahead prevents firms from investing in, and developing its supply chain and workforce. This in turn restricts opportunities for companies to expand and grow, and for employees to develop into a more highly-skilled, and therefore paid, unit. We have seen this most recently in the roads sector, where constant stop-start investment has driven up costs as industry has gone through a continual cycle of gearing up and gearing down as projects have been cancelled and reinstated, sometimes multiple times.

Ultimately this and the unrealised economic benefits of failed infrastructure projects cost the economy as competitiveness and connectivity are lost, and the UK loses out. This can be in terms of an inability to conduct business due to poor infrastructure, through less Foreign Direct Investment being attracted into the UK, and thus to its competitors in the global market.

It would be unfair not to point out that the Coalition Government has realised this is a problem, and that progress has been made in the past five years to work around this landscape and provide some overall strategy and direction. The National Infrastructure Plan has done much to give some forward pipeline that means the construction sector can invest with some confidence that work will be forthcoming. We also recognise the allocation of responsibility for this portfolio to the Commercial Secretary to the Treasury, an important move that forms the precursor to our proposals.

In addition, measures announced at the 2014 Budget putting the Highways Agency (soon to be Highways England) and TfL on six-year spending profiles will have a positive impact, alongside the five year Control Periods for rail already in existence. They will enable better planning as organisations have security of available funds, ensure greater efficiencies through reduced need to keep scaling up and down as a more consistent stream of work comes through, and encourage a whole life cost approach. It will also impact the supply chain, which will be able to plan more effectively and realise efficiencies as the costs associated with having to gear up and down continually are minimised.

The fruits of these policies can already be seen in a number of areas. In September 2014 Arcadis, the asset design and consultancy business, released data that showed that the UK has moved up into the top 10 in a list of the world's most attractive markets for infrastructure investment. Factors such as the ease of doing business, government policy, and the strength of the economy were all taken into account as the UK moved up three places on the previous year's position.

In particular, Airport City Manchester, the London Array wind farm in Kent, and the new nuclear power plant at Hinkley Point C were listed as projects that have helped lift the UK up the table. Investment for these three projects is coming from China (Beijing Construction Engineering Group), Canada (pension fund La Caisse), and France (EF), respectively. Moves are also afoot in the UK to create similar funding mechanisms, with the London Pension Fund Association and the Lancashire Pension Fund linking up in what is hoped will provide a template for further partnerships.

The same report, however, warns that factors including inflationary and supply chain pressures, a slowdown in energy investment, and project delays could undermine this hard work. Steve Bromhead, Arcadis' UK head of infrastructure said, 'The government needs to provide long-term clarity over infrastructure policy and look at the over-prescriptive nature of regulation in several key areas.'

This is all by way of saying that, while the government has made improvements to its approach to the development and delivery of infrastructure, certainly in terms of their foundations. There is still more that needs to be done. Future governments cannot afford to rest on their laurels, and the next step, in the view of this paper, is to bring more of the functions associated with infrastructure's policy delivery under one roof to provide the long-term clarity of policy.

The need for leadership

Given the size of the challenge facing the development of the UK's key infrastructure, ACE suggests an effective and more coordinated response from government is needed. The direction of the UK's infrastructure will likely become increasingly important to the national interest in response to competitive pressures and economic growth.

Furthermore, there are inherent linkages and interdependencies between modes of infrastructure. For example, in order for progress to be made on rolling out electric vehicle infrastructure as part of carbon reduction efforts, energy policy needs to be coordinated to meet the expected demand for low carbon electricity.

Issues such as this have at least been recognised by government, which took the decision to establish Infrastructure UK in 2010, a body charged with setting the strategic priorities for infrastructure development over the next five decades. There is also much discussion within the political mainstream about creating some form of infrastructure bank or leveraging pension funds to drive investment, help plug the estimated £463 billion capacity gap, and to improve the UK's chances of meeting its ambitious climate change objectives.

In addition, there was a recognition early on that the National Infrastructure Plan would only be as effective as it could be with strong engagement with all those involved in the delivery and operation of the networks in it. Therefore the National Infrastructure Plan Strategic Engagement Forum (NIPSEF) was created, to bring the financiers, supply chain, asset owners, and end users together with Treasury to provide input, and highlight any obstacles at an early stage.

Limitations

ACE believes that the current leadership structure on infrastructure issues at central government level has a number of shortcomings. Firstly, as we have already stated, many forms of infrastructure are interdependent and their development is essential to support other modes. For example, transport policy has a crucial dependency upon energy policy.

There is a risk of poor coordination between UK strategic aims and local, regional and devolved infrastructure priorities. The difficulties in agreeing the right aviation policy is just one example of this. This failure to adequately coordinate also risks failure to achieve the UK's climate change objectives.

Inevitably, the current formation of Whitehall leads to the potential for duplication of work across the various departments, regional and local governments, and the devolved authorities, thus wasting time and money. There could also be a risk of disconnects in decision making processes through matrix management and multiple leaders. Such disconnects can result in less effective and uncoordinated delivery of key infrastructure projects and improvements.

Finally, with multiple departments involved in infrastructure, there is a danger that best practice might not be shared. This would result in, among other things, a failure to achieve economies of scale, particularly in procurement, reducing value for money invested in infrastructure schemes.

A Department for Infrastructure

We believe one possible solution, already alluded to, is to create a DfI, which would assume the responsibilities currently held by disparate Whitehall departments. DfI would ascertain the strategic economic infrastructure needs of the UK, formulate policy, guide the development and delivery of the networks through existing partners such as Network Rail and the private sector.

These are responsibilities that currently reside with DfT, DECC, DEFRA, HMT, and DCMS. The department would be led politically by a new Secretary of State for Infrastructure, a Cabinet level post which has the potential to become one of the most prestigious appointments in the UK government.

This new department would take responsibility for leading and advising on the conception, formulation, project design, coordination, and delivery of all strategic economic infrastructure at central government level. It would also be expected to work closely with relevant delivery bodies on the necessary linkages between these new strategic networks, to ensure they are fully integrated into existing assets. Remaining responsibilities for the operation and maintenance of existing infrastructure, as well as the formulation of strategy for new non-strategic infrastructure would remain with the existing departments.

This new strategic planning function for all economic infrastructure would necessitate the creation of a body similar in nature to the Office of Budget Responsibility (OBR) or indeed the NIC, as outlined in the Armitt Review. It is envisaged that the appointment of commissioners to this body would also mirror the OBR, with candidates nominated by the Secretary of State scrutinised by a new Infrastructure Select Committee before taking up their posts.

The remit of this body would replicate existing bodies that sit within government departments, for example the Automotive Council at BIS, and advise on the UK's infrastructure requirements over a 30-50 year period, taking into account factors such as ONS estimates around population growth and the changing age profile. As the Armitt Review states, this is to 'foster long term economic growth across the UK and maintain the UK's international competitiveness amongst the G20 nations.'[7]

The focus of this body would continue to be that infrastructure designated "nationally significant" as defined under the 2008 Planning Act (energy, transport, water and waste). It would also incorporate those elements of the communications network deemed to be similarly significant.

A National Infrastructure Assessment would be produced within a year of the creation of the National Infrastructure Commission looking at the UK's needs for the following half century. This would be produced following extensive consultation with devolved regional and national bodies, regulators, stakeholders, and the wider economy. From that assessment a National Infrastructure Plan will be developed, again through consultation with the devolved nations and regions, which will contain the overall infrastructure strategy for the following 15 years.

7. The Armitt Review, p. 19

This structure would necessitate that DfI and NIC liaise with Devolved Bodies and incorporate those Devolved Bodies' own infrastructure plans into a national framework. This could be achieved by replicating, as in the case of Australia and Canada, the DfI-NIC structure in Cardiff, Edinburgh, and Belfast.

The implementation of the high-level, strategic planning function would predominantly be achieved through Infrastructure UK (IUK), the key team within government that has responsibility for overseeing the development, funding, and prioritisation of strategic infrastructure. IUK currently sits within HMT, however under this proposal it would move across to the new DfI. IUK would also work through the existing regulators of infrastructure, Ofgem, Ofwat, Ofcom, and the ORR, responsibility for which would move across from the existing departments to the new DfI.

These bodies are already responsible for setting the regulatory and investment environment for the UK's infrastructure providers, the likes of Network Rail, the water, power, communications companies, etc. Through the likes of the AMP cycle for water and control periods for rail, strategic investment priorities are set, funding levels are decided upon, and work programmes are put forward for five or six year periods.

This puts the regulators in a unique position to ensure delivery of the long-term strategic priorities of each infrastructure mode, something that rehousing them in a dedicated department will help to embed in the minds of the key-decision makers who will occupy the role of Secretary of State for Infrastructure.

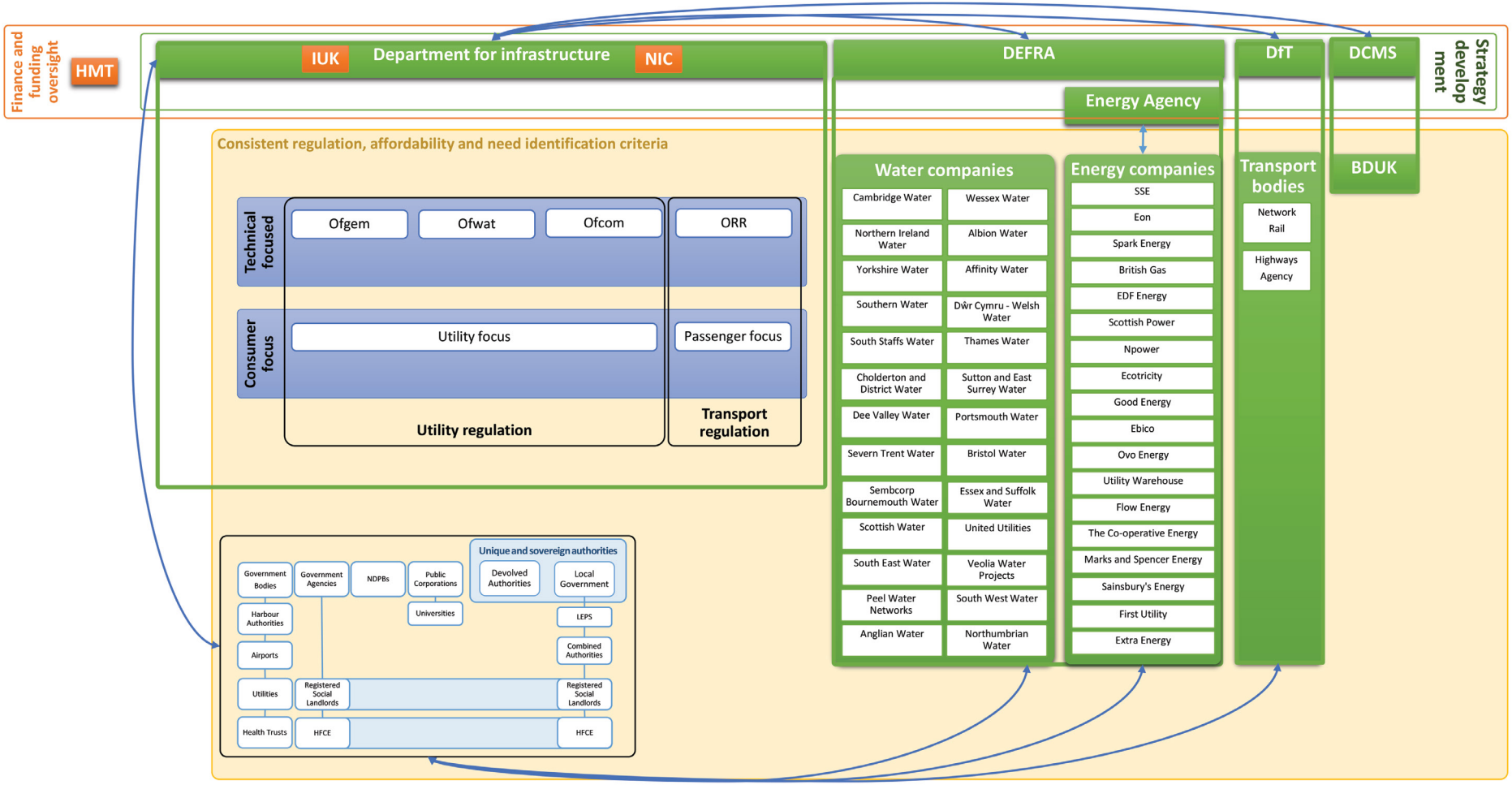
This department also has the additional benefit of being able to better coordinate both technical analysis and regulation of the private companies charged with the delivery of many of the public services associated with our infrastructure. In addition, this structure brings together the various consumer and competition regulators and aligns them for the first time. This should focus government's investment decisions to the extent that money invested is affordable not only within one sector, but across all sectors in their entirety. It would also improve the transparency and quality of information provided to the general public.

The DfI would aim to deliver for infrastructure what DEFRA currently does for climate change adaptation – providing a single lead authority to ensure consistency of approach across central government. It could be created by reassigning existing responsibilities across Whitehall, and would not necessarily require significant transfer of powers between national, regional and local government.

A new department would assume responsibility for those policy areas that directly affect the development of strategic economic infrastructure, and would work closely with all other departments and public entities whose policies may affect development of, or demand for, infrastructure capacity.

This reallocation of responsibilities would result in a refocusing and rebranding of other Whitehall departments. DECC would be abolished completely, with its climate change and energy regulatory responsibilities packaged into bespoke agencies and moving to DEFRA to create one single point of leadership for climate change across Whitehall.

In addition, the remaining Whitehall departments, National Governments, and regional and local organisations would retain responsibility for the delivery of that infrastructure not deemed 'strategic' in nature. As previously stated, however, DfI would work closely with the relevant bodies on connections to and from new stretches of motorway, for example. This would ensure full integration, and possibly enable project savings as a result of the work being carried out as one programme.


Finance and funding oversight
HMT
IUK
Department for infrastructure
NIC
DEFRA
DfT
DCMS
Strategy development
Energy Agency
Consistent regulation, affordability and need identification criteria
Technical focused
Ofgem
Ofwat
Ofcom
ORR
Consumer focus
Utility focus
Passenger focus
Utility regulation
Transport regulation
Water companies
Cambridge Water
Wessex Water
Northern Ireland Water
Albion Water
Yorkshire Water
Affinity Water
Southern Water
Dŵr Cymru - Welsh Water
South Staffs Water
Thames Water
Cholderton and District Water
Sutton and East Surrey Water
Dee Valley Water
Portsmouth Water
Severn Trent Water
Bristol Water
Sembcorp Bournemouth Water
Essex and Suffolk Water
Scottish Water
United Utilities
South East Water
Veolia Water Projects
Peel Water Networks
South West Water
Anglian Water
Northumbrian Water
Energy companies
SSE
Eon
Spark Energy
British Gas
EDF Energy
Scottish Power
Npower
Ecotricity
Good Energy
Ebico
Ovo Energy
Utility Warehouse
Flow Energy
The Co-operative Energy
Marks and Spencer Energy
Sainsbury's Energy
First Utility
Extra Energy
Transport bodies
Network Rail
Highways Agency
BDUK
Unique and sovereign authorities
Government Bodies
Government Agencies
NDPBs
Public Corporations
Devolved Authorities
Local Government
Harbour Authorities
Universities
LEPS
Airports
Combined Authorities
Utilities
Registered Social Landlords
Registered Social Landlords
Health Trusts
HFCE
HFCE

Finally, operation and maintenance of all economic infrastructure, be it strategic, regional, or local in nature will continue to be the responsibility of whichever department currently holds it. All Whitehall departments affected in this reorganisation would also remain cabinet-level positions, and would be expected to work closely with a new DfI to ensure full integration of new and existing infrastructure, compatibility of short and long term strategic plans, and the appropriateness of individual projects.

The following table summarises the changes to the remits of central government departments that would occur as a result.

Department	Proposed changes
Department for Infrastructure	New department created by bringing the individual regulators (Ofgem, Ofwat, Ofcom, ORR) to be supported by a single department. Would absorb responsibility for Infrastructure UK from the Treasury. Responsible for the relationship with other central government departments, devolved authorities and the Mayor of London's office on infrastructure issues.
Treasury	Would transfer responsibility for Infrastructure UK (to DfI). Would work closely with DfI on finance and funding and prioritisation. OBR would be responsible for assessing the plans as it currently does for other departments.
Department for Transport	Would transfer responsibility the ORR and for strategically significant transport projects (to DfI). Would work closely with DfI to delivery connections to and from new infrastructure.
Department for the Environment, Food, and Rural Affairs	Would transfer responsibility for Ofwat and leadership on strategic water and waste issues (to DfI). Would absorb responsibility for coordinating mitigation efforts from DECC, alongside existing adaptation responsibility.
Department for Culture, Media, and Sport	Would transfer responsibility for Ofcom and strategically significant digital communications (to DfI), taking on an operation and maintenance role.
Department for Communities and Local Government	Would retain responsibility for housing and planning procedures as at present. Would work closely with DfI to ensure compatibility with social and community policies.
Department for Business, Innovation, and Skills	Would work closely with DfI to ensure compatibility with industrial strategy.
Devolved authorities	Would work closely with DfI to ensure compatibility of policy priorities across borders.
Department of Energy and Climate Change	Would be abolished completely as responsibility for Ofgem moved (to DfI) and energy regulatory (an Energy Agency) and climate change portions of portfolio moves to DEFRA.

Benchmarking with global best in class – Canada

In Canada there is a body, Infrastructure Canada that leads federal efforts to ensure that Canadians benefit from world-class modern public infrastructure. While acting as a key funding partner, the body also engages with provinces, territories, municipalities, and the private and third sectors to build and revitalise the infrastructure the country needs.

Successive Budgets in Canada have seen Infrastructure Canada produce long-term plans for infrastructure development. These have included the seven-year $33bn Building Canada Plan in 2007 and the shorter-term Economic Action Plan designed as a stimulus to fight the effects of the global recession in 2009.

In addition, in Budget 2013, a new $53bn 10-year funding commitment to provincial, territorial, and municipal infrastructure, beginning in 2014 was announced. This new Building Canada programme aims to deliver new and upgraded transport and other public infrastructure across the country. As in Australia, the position of Minister of Infrastructure is also held by a high-ranking member of the cabinet.

The engagement and development of the strategic plans involves the provincial or territorial ministries, such as the Ontarian Ministry for Economic Development, Employment and Infrastructure in Canada. This demonstrates the viability of developing a long term strategic plan for infrastructure within a more federal constitution that the UK seems to be heading towards.

Benefits

There are a number of benefits to this new approach to the development and delivery of the UK's strategically important economic infrastructure. In the first instance, the creation of a Secretary of State for Infrastructure, a Cabinet level post, would send a powerful message regarding the national importance of infrastructure. The aim would be to ensure this role became one of the great offices of state, similar to the Home or Foreign Secretaries, or the Chancellor of the Exchequer.

Clear leadership on key policy issues at the very top of government will also reduce the scope for confusion and increase certainty. Industry, National Governments and, local government agencies for instance, will be able to deal with a single point of contact and guidance within Whitehall on all strategic infrastructure-related issues. This new structure should result in better interface between central government, devolved, and local policymakers.

A single authority for strategic planning and delivery across all economic infrastructure modes would mean, rather than being developed in silos across Whitehall, teams in the same location would have a better understanding of the interdependencies of our infrastructure, and be able to plan more efficiently.

For example, while High Speed Two is a transport project, it will require a great deal of energy, while if any portions of the route pass through flood plains, there will be a need to ensure proper protections are in place. A single department in which all this could be planned for would be much more efficient and flexible enough to be able to anticipate such issues.

There would be a better alignment of transport, energy, water, and other infrastructure priorities. One department overseeing it all could ensure workstreams did not overlap significantly and avoid negative implications such as, for instance, inflationary pressures as workforces with the necessary skills become scarce. As above, the question of the interdependencies will be better answered as teams have more interaction and input into each other's work.

Benchmarking with global best in class – Japan

In 2001 Japan established a Ministry for Infrastructure, Land, Transport and Tourism, again which has responsibility for the development and provision of strategic infrastructure across the whole country. This was formed when various ministries including Transport, Construction, and the National Land Agency were merged in administrative reforms.

It contains bureaus within it for policy planning, roads, and water, for instance, and is responsible for around one-third of all the legislation in Japan. Again, this position occupies a very high profile position within the Japanese cabinet, reflecting the importance in which the work of the department is held, and how ACE would envisage such a position in the UK being esteemed.

It should be noted, though, that none of the above examples go quite as far as this paper does in proposing a DfI. For instance, there is no integration between leadership on transport and energy infrastructure in Australia, Canada or Japan. A UK DfI would seek to bring together leadership on all of the key nationally significant modes of economic infrastructure and so would go further, building on these successful examples.

This would lead to more effective programme management structures being put in place to better manage both single and multi-modal projects and design them effectively to allow for improved transfers between them. Industry is currently engaging with government and existing infrastructure developers to adopt a 'whole life cost' approach to the provision. With a government department whose sole aim is to take the long view on such issues, this should become an embedded culture. It might even spread to the other departments who could adopt such attitudes to the operation and maintenance of the existing networks.

Finally, there are a number of cost savings that could be realised as a result of the creation of a DfI, and a reduction in maintenance costs through a more multi-modal view of the infrastructure. This could take the form of using the opportunity of the construction of a new road to lay electricity or high speed broadband cables at the same time, reducing the need to dig the road up at a later date, limiting disruption, and therefore minimising cost.

Cost savings would be achieved by eliminating duplicate departments and roles within central government, revenue would be generated by selling off buildings from the government estate deemed surplus to requirements, while greater potential for outsourcing services would be available due to better programme management structures.

Challenges

As stated earlier in this paper, the debate on how to better organise central government to deliver the necessary economic infrastructure has begun in earnest in recent months. The proposal of a NIC by Sir John Armitt is one of the major ideas occupying the territory at the current time, however, in ACE's view a DfI and a NIC may not be completely mutually exclusive.

Indeed, they could function alongside each other, with the NIC providing exactly the kind of robust analysis envisaged by the Armitt Commission, only for the DfI. In this way, the NIC would exist and perform in a similar way to that of the OBR within Treasury, analysing plans, speculating on impacts, and suggesting remedies. In addition, the OBR would also be tasked with analysing any plans produced by DfI, as it currently does for existing Whitehall departments.

In the short-term, there might be a number of challenges that would need to be overcome in addition. For instance, as rebranding, redeployment, redundancies etc. take place, additional short-term costs would be incurred. There is also a risk that the transition period to the new departmental structures may be confusing to some.

These changes might lead to the business community experiencing some uncertainty in the very short term, however, we would anticipate the medium and long term certainty it would engender would more than offset this. It would also be for a far shorter period than currently envisaged by the Armitt Commission proposals. From within the Civil Service and public sector unions there might also be some opposition over any redundancies that occur as a result, however, this should be overcome by the government's strength of commitment to establish a DfI.

None of these issues supposed obstacles, however, would prove to be long-term in nature, and would be easily resolvable given enough notification and consultation. Staff could be redeployed, business fears could be allayed, and programme pipelines could be set so departmental involvement would be minimal during the transition.

In addition, existing engagement bodies such as NIPSEF could be adopted to become the major communication platform to address industry and wider stakeholder concerns. These should all go some way to allaying the fears and minimising the uncertainty around the transition.

Benchmarking with global best in class – Australia

Since 2007, Australia has had a department of government charged with the responsibility for national policies and programmes that promote, evaluate, plan, and invest in infrastructure. In addition, not only is the post holder a cabinet member in the Australian government, but at the present time it is held by the Deputy Prime Minister, the Hon. Warren Truss MP. This is an indication of the level of importance placed on this position.

The functions of the department include planning and co-ordination, transport safety and security, and major projects. There is also a prominent business unit within the department, the Bureau of Infrastructure, Transport, and Regional Economies (BITRE), which provides economic analysis and research and statistics on infrastructure issues. This is perhaps a role that a NIC of the kind envisioned by the Armitt Commission could fulfil excellently within a UK DfI.

Conclusions

The UK has seen good progress in the past five years in terms of infrastructure planning and delivery. Cross-party consensus on many of the programmes of work has ensured confidence and certainty that the money will be forthcoming, that minds will not be changed with a new government, and that the process will move from the legislative to the delivery phase quickly. Additionally, initiatives such as the National Infrastructure Plan have developed and are producing something akin to a strategy for the UK.

There needs to be a step-change now, however, as we are reaching the point at which further refinements produce ever decreasing returns. One such proposal from the Armitt Commission has been that a NIC should be established. The time it takes to put together its assessment and the size of the commission could be drawbacks. Another potential solution, indeed the second half of it, could also be that a dedicated DfI should be set up, with high-level cabinet representation, and responsibility for setting long-term strategy.

A potential solution could be that a dedicated DfI should be set up, with high-level cabinet representation, and responsibility for setting long-term strategy.

Working together with a streamlined NIC and IUK (rehoused from Treasury) to ascertain the needs and devise an overall strategy, would embed a new confidence in government data, policies, and direction. Bringing together into one Whitehall department the sector regulators (Ofgem, Ofwat, ORR, Ofcom, etc.) that set the environment, funding levels, and outcomes would ensure future government strategies were enacted.

A new DfI would also produce the benefit of streamlining the number of organisations that have responsibility for developing and delivering our economic infrastructure and enabling greater coordination between the different modes. None of the infrastructure we need exists in a vacuum, however, and while the current Whitehall structure is sub-optimal for considering the interdependencies between our networks, a new DfI would overcome this hazard.

Indeed, ACE envisages that this new DfI would actually become a centre of excellence for the development and delivery of infrastructure. By bringing the functions that go into this into one department, the right environment would be created whereby greater coordination would be embedded, silos would be brought down, and integration would become a habit.

Finally, this is not uncharted territory. Our global competitors are stealing a march on the UK, realising the significance of infrastructure and its role in producing a dynamic, sustainable, prosperous, and fair economy and establishing directorates commensurate with this status. This challenge to the nation that gave the world much of the infrastructure we now take for granted is also an opportunity to emulate and innovate, to adopt the best parts and learn the lessons. This is the gauntlet that has been thrown down and it is one the UK must not be afraid to pick up if we are to deliver the economic infrastructure we will need in years to come.

About ACE

As the leading business association in the sector, ACE represents the interests of professional consultancy and engineering companies, large and small, in the UK. Many of our member companies have gained international recognition and acclaim and employ over 250,000 staff worldwide.

ACE members are at the heart of delivering, maintaining, and upgrading our buildings, structures, and infrastructure. They provide specialist services to a diverse range of sectors including water, transportation, housing, and energy.

The ACE membership acts as the bridge between consultants, engineers, and the wider construction sector that together make an estimated contribution of £15bn to the nation's economy, with the wider construction market contributing a further £90bn.

ACE's powerful representation and lobbying to government, major clients, the media, and other key stakeholders, enables it to promote the critical contribution that engineers and consultants make to the nation's developing infrastructure.

Through our publications, market intelligence, events and networking, business guidance and personal contact, we provide a cohesive approach and direction for our members and the wider industry. In recognising the dynamics of our industry, we support and encourage our members in all aspects of their business, helping them to optimise performance and embrace opportunity.

Our fundamental purposes are to promote the worth of our industry and to give voice to our members. We do so with passion and vision, support and commitment, integrity and professionalism.

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