

Upgrading infrastructure



The opportunity

Investment in economic infrastructure⁶⁴ is a key part of industrial strategy. The Government often needs to back investments which cannot be provided by the private sector, but go on to be transformative in the long term. But private investment is crucial too. Getting the right investment and regulatory relationship between the Government and private providers can unlock investment in infrastructure and support longer term growth. Previous industrial revolutions, from railways to mobile telecoms have spread because we got this relationship right.

Infrastructure supports the other pillars of a modern industrial strategy. Good transport infrastructure does not just reduce delays; it can raise productivity by enabling towns and cities to achieve agglomeration effects, and so support the rebalancing of our economy.

Better connected towns and cities have deeper labour markets, greater competition and greater economies of scale, leading to higher growth and living standards. This is one reason the Government is supporting the development of major infrastructure projects like Northern Powerhouse Rail and the Midlands Rail Hub – to join up towns and cities more effectively, and enable them to pool their labour markets and economic strengths. HS2 is driving major regeneration schemes across the UK and has already played a role in attracting significant new investments.

Good digital infrastructure also opens up new opportunities for growth, for example through better connected business and consumers. Research suggests that increased broadband speeds alone could add £17 billion to UK output by 2024⁶⁵.

Improvements to digital infrastructure will be felt most in rural areas. Supporting the roll-out of fast broadband in rural areas enables new business to locate and grow there. It is estimated that an increase in broadband penetration of 10 per cent yields 0.25 per cent increase in GDP growth⁶⁶.

Resilient infrastructure fit for our long-term needs is vital to economic growth – such as water supplies for businesses and people. Investing in infrastructure also mitigates potential economic losses, for example from a changing climate, flooding and drought. The 2016 National Flood Resilience Review sets out our expectations of key infrastructure providers to ensure assets are flood resilient, minimising the impact on immediate and wider communities and business.

Infrastructure investment can also play a key role in driving and supporting private funding, such as to encourage private investment in housing-building on much-needed but more challenging sites.

Alongside these economic benefits, high quality infrastructure provision can raise living standards directly and have a positive impact

on health through reduced costs and time of travel, reduced pollution, and faster and lower-cost digital and transport connectivity.

The UK starts from a better position than its competitor countries in terms of private sector involvement in infrastructure. Nabarro LLP's 2015 Infrastructure Index⁶⁷ judges the UK as the number one country for attracting private infrastructure investment, with an innovative business environment and high rates of private participation. The UK's system of economic regulation is also regarded as one of the best in the world, supporting investor confidence through its stable and independent regime.

New opportunities are now being opened up by the combination of increased investment matched by the creation of a better institutional framework for planning infrastructure.

The Autumn Statement set out how central Government economic infrastructure investment will rise by almost 60 per cent between 2016/17 (£14 billion) and 2020/21 (£22 billion). This increased funding is matched by better planning. Since 2010 we have moved away from stop-go planning for infrastructure, creating multi-year budgets for road spending and putting Network Rail's long term plans on a sounder footing. The publication of the first National Infrastructure Plan in 2010 and the National Infrastructure Delivery Plan 2016-21, along with the new National Infrastructure Commission is driving better long-term planning, including considerations of the interdependencies between different types of infrastructure. The creation of the Infrastructure and Projects Authority (IPA) enables this long-term planning to be translated into successful project delivery.

Higher investment plus a better framework for planning creates the opportunity to address the UK's historic weaknesses on infrastructure.

The challenge

It is critical we continue to focus on improving our infrastructure services.

In recent years, the UK's performance has been rated poorly compared with other developed countries, and business highlights it as a key issue. According to the International Monetary Fund, UK capital stock is the lowest of all G7 countries⁶⁸, while the World Economic Forum ranks the country 24th globally in overall transport infrastructure quality (the second lowest of the G7)⁶⁹. A survey⁷⁰ in 2015 by the Confederation of British Industry found that 90 per cent of businesses were concerned that trains are full, 96 per cent felt that roads are too congested, and 59 per cent were dissatisfied with the reliability of digital connections.

These national weaknesses are felt more acutely in certain areas of the country exacerbating regional disparities. People experience lengthy journey times and poor transport links, particularly outside London and the South East. Manchester and Leeds are less than 40 miles apart and yet on the congested M62 this often takes more than two hours by car. The distance between London and Paris is more than double that between Liverpool and Hull. Yet travelling from Liverpool to Hull by train takes longer. Such challenges directly affect our workforce, creating a shallower labour market and less choice and competition. That leads to lower growth and living standards.

Our weak record on economic infrastructure has been driven by a number of factors.

There has been an **historic lack of clear long-term thinking in the Government's approach to national infrastructure strategy – in how we join up at a national level**, and in a way that more consistently considers the interdependencies of infrastructure sectors.



This has contributed to the disjointed **provision of infrastructure and a legacy of underinvestment**. The recent introduction of National Policy Statements and the development of the National Infrastructure Plan (now the National Infrastructure Delivery Plan) has helped, but this underinvestment has led to low confidence among investors and undermined planning in the supply chain.

The absence of a clear national strategy has been compounded by the **lack of joined-up policies to meet local needs**. The fault lies partly in the poor coordination between central and local government, but also the lack of strong infrastructure institutions such as Transport for London outside the capital.

There have also been problems with the delivery of schemes. Projects have been delayed by years and provided at excessive cost. There has been improvement in recent years, but the local planning and consent system still remains a contributing factor in some instances. There has also been fragmentation in the construction sector and its supply chain, with businesses often unable to deliver long term investment at large scale. This is combined with shortages in key construction skills.

Ultimately, lower levels of infrastructure investment outside London – particularly transport funding – has held back other towns, cities and areas. This issue is explored in more detail in the chapters below.

Our approach

This Government has begun to tackle our infrastructure challenge. We are providing **higher rates of public investment**, with improved institutions to support how the money is best spent. This will provide greater certainty and long-term direction across infrastructure policy, including, where relevant, how we use and improve our stock of natural capital⁷¹.

We will continue to **support private sector infrastructure investment**, by creating the right business environment through more consistent policies and, where appropriate, through direct support schemes set out below.

We will continue to focus on how we can deliver infrastructure more effectively, and make **infrastructure costs more competitive** against global comparisons.

Finally, we will **align the planning of infrastructure more effectively with local growth priorities** to ensure more places benefit. Infrastructure decisions will be better matched with local economic plans to boost productivity locally and support places that have suffered historical underinvestment. We will create a stronger institutional framework to support this process for cities and regions across the country. Each of these is explored in more detail below.

Higher rates of public infrastructure investment

In the Autumn Statement 2016, the Government committed additional capital to fund new high-value economic infrastructure over the next 4 years through the National Productivity Investment Fund (NPIF).

This includes:

- **£2.6 billion for improvements in transport projects;** including £1.3 billion for upgrades to local transport and national roads, £390 million for future transport, including support for ultra low emission vehicles and connected and autonomous vehicles, and over £450 million to support rail improvements including digital signalling, smart ticketing and other measures to improve services.
- **Government investment of £400 million in a new Digital Infrastructure Investment Fund** to boost commercial finance for emerging fibre broadband providers, with £740 million earmarked for:
 - Local full fibre broadband rollout – developing the infrastructure to deploy full fibre networks into businesses and the public sector
 - 5G mobile technology and optical fibre – coordinated programme of integrated 5G and fibre projects to accelerate and de-risk deployment of future digital technologies
- **A new £2.3 billion Housing Infrastructure Fund,** a flexible new fund which will back infrastructure such as transport and utilities, which can encourage new private investment in housing.
- **£170 million investment in flood defences, as part of a total £2.5 billion of investment over six years.** Key projects will include improving the resilience of the railway at Dawlish, building 1,500 new flood defence schemes and protecting over 300,000 more homes.

These plans build on the commitments made in the Spending Review 2015. Central government economic infrastructure investment will now rise by almost 60 per cent between 16/17 (£14 billion) and 20/21 (£22 billion).

The Government has also asked the National Infrastructure Commission to plan on the basis that government infrastructure spending will be between one and 1.2 per cent of GDP between 2020 and 2050. This would sustain our new higher level of spending consistently over the medium term.

Supporting private sector infrastructure investment

The Government is taking the necessary decisions to drive forward progress on specific critical projects:

- support for a new runway at Heathrow – the first full length runway in the south-east since the Second World War, the development of which will benefit the whole country
- confirmation of Hinkley Point C – the first new nuclear power station for a generation
- further investment in and progression on road and rail projects, including setting out the route for phase 2 of HS2

In addition to taking the decisions on major projects, the Government is creating a framework to enable higher levels of private investment in infrastructure. This includes:

- **Infrastructure bonds and loans.**
The Government is supporting private infrastructure investment by providing the £40 billion UK Guarantees Scheme (UKGS) to help projects raise finance from the capital markets through Treasury-backed guarantees for bonds and loans. The Autumn Statement extended this scheme to at least 2026 and we will explore creating

new construction-only guarantees which will provide new opportunities for private involvement in infrastructure.

- **Public-Private Partnerships.**
The Autumn Statement also committed to the exploration of a new pipeline of projects suitable for delivery through the Public-Private Partnership scheme PF2, to be set out in early 2017. This will provide new opportunities for the private sector to play a role in delivering infrastructure.

Making infrastructure costs more competitive

The Infrastructure and Projects Authority will lead a new review to identify ways the Government, working with industry, can improve the quality, cost and performance of our infrastructure. The review will report in summer 2017 and will build on the 2010-2014 Infrastructure Cost Review, which supported a 15 per cent reduction in the capital cost of projects.

The Chief Secretary to the Treasury will also chair a new Infrastructure Delivery Ministerial Group which will oversee the delivery of the Government's infrastructure commitments through tackling cross-cutting issues which are challenging the delivery of priority projects.

Better matching infrastructure to local plans, using infrastructure to support local growth

The provision of new funding at the Autumn Statement 2016 will allow public funding to support local economic plans.

The new £2.3 billion Housing Infrastructure Fund will allow joined-up planning for housing and infrastructure for the first time. At present, local councils' choices about where to encourage development are constrained by a lack of resources to build roads, install utilities like electricity and sewerage, and carry out other requirements to make sites viable.

The Autumn Statement announced £1.1 billion of additional funding to upgrade local transport, to improve congestion, growth and housing. Through devolution deals with major cities we are devolving decisions over public transport, and roads from Whitehall, enabling cities to take a joined up approach to planning infrastructure for public transport, housing and industrial growth.

Regional strategic transport bodies such as Transport for the North and Midlands Connect will help to ensure that transport projects are more closely linked with economic priorities, and so really benefit people across communities. We will support these regions to roll out smart ticketing across multiple transport types and are providing development funding for major upgrades to regional connectivity, including Northern Powerhouse Rail and the Midlands Rail Hub.

Data infrastructure

As well as physical and digital infrastructure, we need to make sure that we also have in place an effective data infrastructure. This means the right elements for an economy in which open data drives growth, efficiency and innovation.

This includes secure services that allow individuals and organisations to prove who they are online – for example, the GOV.UK VERIFY service, which gives people safer, simpler and faster access to government services like filing their tax or checking the information on their driving licence.





Upgrading infrastructure

Actions under way:

- **We are providing greater certainty and a clear long-term direction:** central government economic infrastructure investment will now rise by almost 60 per cent between 2016/17 (£14 billion) and 2020/21 (£22 billion).
- **We are creating a better institutional framework,** with longer-term budgets and the creation of the National Infrastructure Commission.
- **The Government will deliver projects more effectively:** We created the Infrastructure and Projects Authority in January 2016 to support the successful delivery of the Government's infrastructure priorities. Part of both the Cabinet Office and Treasury, it brings together the expertise of Infrastructure UK and the Major Projects Authority into a single organisation at the heart of government.
- **We are supporting private sector infrastructure provision** by providing the £40 billion UK Guarantees Scheme (UKGS) to help projects raise finance from the capital markets through Treasury-backed guarantees for infrastructure bonds and loans; and using private finance to deliver public assets through the Private Finance 2 model. The Autumn Statement 2016 included new announcements about both the UKGS and PF2: the government has extended the UKGS to at least 2026, and committed to explore construction-only guarantees; and has committed to explore a new pipeline of projects suitable for delivery through PF2, to be set out in early 2017.
- **We are improving local involvement in infrastructure policy:** The Government has agreed multiple mayoral devolution deals with cities and regions across England in recent years. These mayors will have control over a consolidated transport budget and 30-year investment funds, enabling strategic prioritisation of projects in a way that is properly informed by local need. Plans announced in the Autumn Statement 2016 will enable Mayoral Combined Authorities to borrow for investment, and the Government is consulting on introducing a new lower borrowing rate for local government infrastructure projects, helping local government finance and build infrastructure at a lower cost.
- **Regional strategic transport bodies such as Transport for the North and Midlands Connect** will help to ensure that transport projects are more closely linked with economic priorities, and so really benefit people across communities. We will support these regions to roll out smart ticketing across multiple transport types and are providing development funding for major upgrades to regional connectivity, including Northern Powerhouse Rail and the Midlands Rail Hub.
- **Accelerating the digital modernisation of railways.** The Autumn Statement allocated over £450 million to trial the deployment of digital signalling, which has the potential to increase capacity dramatically and improve reliability on existing rail routes. Over the next 10 years, public and private investment in digital rail signalling will aim to cement UK leadership in a global market which will be worth over £30 billion by 2020. To achieve this,

we are developing a plan to introduce digital train control technologies on some of the UK's busiest rail links, building on previous experience, and working closely with industry to maximise the opportunity the digital modernisation of railways offers for jobs and growth and the UK's standing in a growing global market.

- **Improving flood defence and resilience.** The Government is committed to spending £2.5 billion by 2021 on improving flood defence and resilience, which will ensure 1,500 new flood defence schemes are built and over 300,000 more homes are better protected.
- **We are making the UK the safest place to do business online:** the Government's £1.9 billion National Cyber Security Strategy set out how we will work to assess the level of cyber security across our critical national infrastructure and have measures in place to intervene where necessary to drive improvements that are in the national interest.
- **The Infrastructure and Projects Authority will lead a new review to identify ways the Government, working with industry, can improve the quality, cost and performance of our infrastructure.** The review will report in summer 2017 and will build on the 2010-2014 Infrastructure Cost Review, which supported a 15 per cent reduction in the capital cost of projects.
- The Chief Secretary to the Treasury will chair a new **Infrastructure Delivery Ministerial Group** which will oversee the delivery of the Government's infrastructure commitments through tackling cross-cutting issues which are challenging the delivery of priority projects.

New commitments:

- **Using infrastructure to support rebalancing.** As we develop and plan future rounds of infrastructure investment we will take account of the balance of spending per head between different regions. We will continue to prioritise the highest value-for-money projects, as we seek to address productivity weaknesses across the country, and unlock the benefits of agglomeration economies.
- **We will support key roads investments, including:**
- **The M60 North West Quadrant,** the most congested road outside of London, which is holding back Greater Manchester and the north as a whole. Major upgrades to the M60 around Manchester will fix a bottleneck that holds back the growth of Manchester, and of the north as a whole.
- **The A66** is an essential link across the north. We will transform the A66 from the A1 to the M6, with the first new dual carriageway across the Pennines since 1971.
- **A303 Stonehenge route.** The A303 is an essential connection for the South West. A key part of the route runs past Stonehenge and we will be consulting on tunnel options that will cut congestion, improve journeys and enhance the iconic monument in its natural setting.

- **Oxford to Cambridge.** We have confirmed plans to go ahead with a new expressway from Oxford to Cambridge. This will help some of our fastest-growing towns and cities create more jobs, change the way people travel nationwide, and take traffic off of roads as far apart as London and Birmingham.
- **Lower Thames Crossing.** More than 47,000 people took part in the consultation on the Lower Thames Crossing earlier this year making it the largest ever public consultation for a UK road project. The Government will consider the findings and take a decision on the location, route and type of crossing in due course.
- **We will support other major infrastructure investments, including:**
- **Connected and autonomous vehicles.** We will cement the UK's position as a go-to destination for the development of this technology by establishing a new testing ecosystem, using both controlled and real world environments. We will announce the location of the coordinating hub for this project by spring 2017.
- **Local transport.** We have announced initial allocations to local areas for 2017/18 from the additional £1.1 billion of funding for local roads and transport.

Questions for consultation

As part of producing its National Infrastructure Assessment, the National Infrastructure Commission has issued a detailed call for evidence, seeking views from stakeholders on a range of questions about UK infrastructure policy. The National Infrastructure Commission's call for evidence is open until 10 February 2017. The questions below seek to complement this work.

15. Are there further actions we could take to support private investment in infrastructure?
16. How can local infrastructure needs be incorporated within national UK infrastructure policy most effectively?
17. What further actions can we take to improve the performance of infrastructure towards international benchmarks? How can government work with industry to ensure we have the skills and supply chain needed to deliver strategic infrastructure in the UK?