

DEMOS

INFRASTRUCTURE FOR THE FUTURE

FIXING THE FOUNDATIONS
OF GROWTH IN BRITAIN

DAN GOSS
CLAUDIA WOOD

MARCH 2025

Headland

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ABOUT THIS PAPER

This briefing, supported by Headland, is part of Demos's work on creating a **Citizen Economy** - one where businesses, the state, regulators and markets are reformed to focus beyond their self-interest and consider the wider needs of our society and economy. It applies this approach to one of the most important economic challenges we face today: building better infrastructure. This follows on from Demos's 2024 paper supported by Headland, *Partnership in Practice: How can the new government work with business to deliver missions?*

SECTION ONE

THE INFRASTRUCTURE CHALLENGE



Our mission to grow the economy is about raising living standards in every single part of the United Kingdom... to achieve this requires greater focus on two key areas: **infrastructure and investment**'

– Rachel Reeves, 29 January 2025¹

THE BRITISH PROBLEM

We do not invest enough in infrastructure

10 years ago, £50 billion (in 2024 prices) was invested in UK infrastructure. That was the equivalent of 2% of GDP, and more than the entire Defense budget.² By 2022, the value of this investment had dropped in real terms to just £45 billion - 1.6% of GDP and significantly lower than the Defense budget.³ This was primarily driven by a fall in private sector investment - down by a third in real terms from £24bn in 2015 to £16bn seven years later. Government investment has remained almost stagnant since 2015.

1 Reeves R. 'Chancellor vows to go further and faster to kickstart economic growth'. 29 January 2025. <https://www.gov.uk/government/speeches/chancellor-vows-to-go-further-and-faster-to-kickstart-economic-growth>

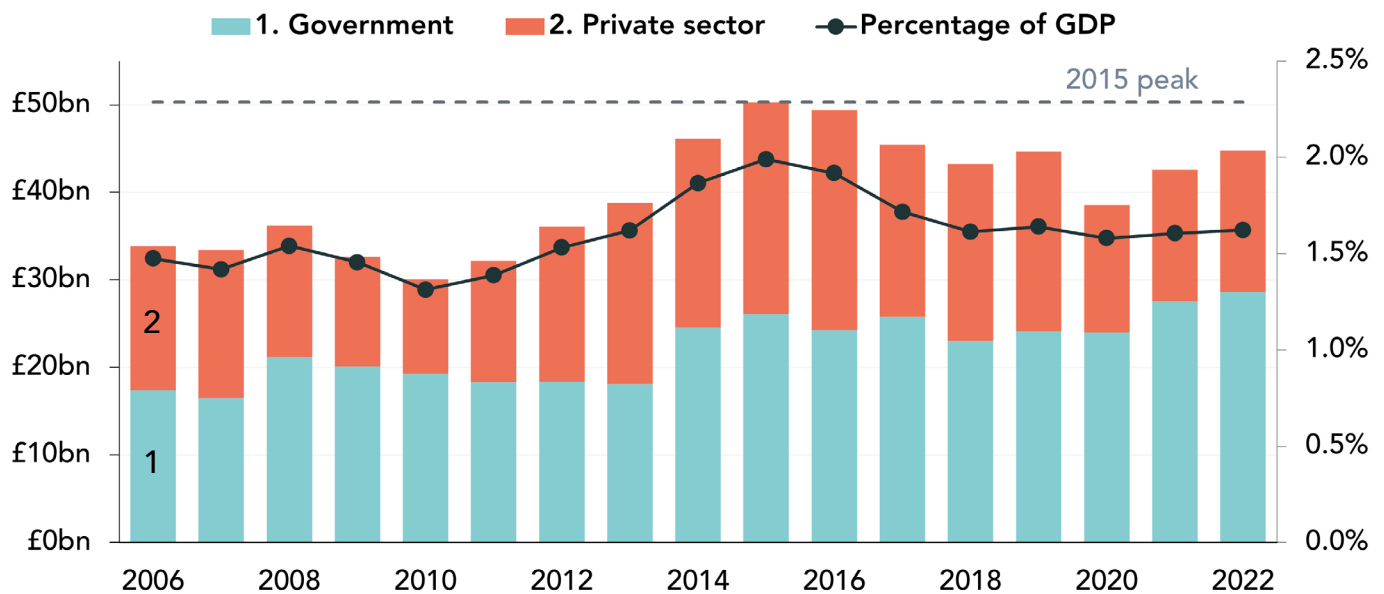
2 ONS. Infrastructure in the UK, investment and net stocks: July 2024. 22 July 2024. <https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/articles/developingnewmeasuresofinfrastructureinvestment/july2024>

3 Kirk-Wade E. UK defence spending. House of Commons Library. 4 December 2024. <https://researchbriefings.files.parliament.uk/documents/CBP-8175/CBP-8175.pdf>

CHART 1

UK infrastructure investment remains below its 2015 peak

Infrastructure investment over time, value (left axis) adjusted to 2024 prices and as percentage of GDP (right axis)



Ernst & Young (EY) calculate there are now £1.6trn worth of infrastructure and energy transition projects planned up to 2040 which are currently unfunded. If historic funding levels continue, EY estimates that there could be a funding shortfall of £700bn, potentially risking the completion of critical infrastructure and energy transition projects.⁴

Our infrastructure is often outdated and uncompetitive

As a result of years of underfunding, UK infrastructure is severely underperforming, with delayed access to energy, congested and environmentally damaging transport, and a wasteful water system:

- **Energy:** To get connected to the UK's electricity network (the grid), the average wait time is five years, but waits can be up to 14 years.^{5,6} Reports suggest that the UK's wait times are the longest in Europe - with the UK spending less on the grid, relative to renewable energy spending, than countries such as Germany, Spain or Italy.^{7,8}
- **Road transport:** Delays on UK roads during peak times are the longest in Europe.⁹ As such, congestion accounts for over 16% of the cost of road freight in the UK, equivalent to around £6bn each year, and among the highest in Europe.¹⁰

4 Joyce R. 'UK faces infrastructure spending shortfall of at least £700bn by 2040 says EY report'. EY. 30 September 2024. https://www.ey.com/en_uk/newsroom/2024/09/uk-infrastructure-shortfall

5 Heynes R. 'Grid Connections Action Plan to cut connection wait from a five year to six month average'. Solar Power Portal. 24 November 2023. <https://www.solarpowerportal.co.uk/grid-connections-action-plan-to-cut-connection-wait-from-a-five-year-to-six-month-average/>

6 Ambrose J. 'Gridlock: why it can take 11 years to connect solar farms to the UK network'. The Guardian. 4 November 2024. <https://www.theguardian.com/business/2024/nov/04/renewable-energy-grid-wait-green-renewal-stellantis-warehouse-solar>

7 Ambrose J. 'Lack of vision': UK green energy projects in limbo as grid struggles to keep pace'. The Guardian. 8 May 2023. <https://www.theguardian.com/business/2023/may/08/uk-green-energy-projects-in-limbo-as-grid-struggles-to-keep-pace>

8 Ambrose J. 'UK 'needs to play catch-up' in global race to rewire electricity grids'. The Guardian. 9 December 2024. <https://www.theguardian.com/business/2024/dec/09/uk-renewable-energy-grid-connection-infrastructure>

9 Table 3 and 4, European Joint Research Centre, Measuring Road Congestion, 2012, <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC69961/congestion%20report%20final.pdf>

10 National Infrastructure Commission. The value of freight. April 2019. https://nic.org.uk/app/uploads/Future-of-Freight_The-Value-of-Freight_Vivid-Economics.pdf

- **Public transport:** Just over a third of Britain's railway lines are electrified, far behind France (59%), and even further behind Poland (63%) or Bulgaria (74%). Fewer than a fifth of our cities have either a metro, light rail or tram network, compared to virtually all Danish cities, 88% of cities in Germany, and 80% in France.¹¹
- **Air transport:** The UK's air transport infrastructure is one of the worst ranked amongst major economies, with only Italy ranking lower in the G7.¹² Our airports are some of the most congested in Europe, with Heathrow, Gatwick and Manchester having the highest levels of delays on departures and arrivals across Europe.
- **Water:** Outdated UK water infrastructure has meant high spillages and water pollution, with 19% of water supply in England lost every year to leaks.^{13,14} Meanwhile, the UK has not built a single reservoir in 30 years, putting huge pressure on supply and amplifying the threat of droughts.^{15,16}

We build new infrastructure slowly and at great expense

Even if the UK Government and private sector were to close the infrastructure funding shortfall and tackle these problems, there is another, more intrinsic problem: the UK builds infrastructure at a higher cost than many of our international competitors. British transport projects, for example, cost £262mn per mile - almost twice the cost of Japan's bullet train network (£145mn per mile), quadruple that in Italy (£74mn/mile), over six times higher than France (£42mn/mile), and almost eight times higher than Germany (£34mn/mile).¹⁷ Similarly, Britain's new motorway bridges cost more than three times as much per mile than in France, Denmark or Norway. Looking at nuclear power plants built since 2000, the costs of construction in the UK were the highest in the world - six times higher than South Korea and more than twice that of France.¹⁸ If the UK is to get back on track, we need to build infrastructure much more efficiently.

The UK also upgrades its infrastructure far too slowly. 80% of 2050s homes have already been built, and retrofitting these with up-to-date energy and water systems will be essential to stop our infrastructure failing at the final stage - for example, through residential leaks or energy wastage. While we currently retrofit around 250,000 homes per year, this needs to rise to 1.5 million by 2035 to meet our net zero, fuel poverty and health goals.¹⁹

The current state of play

The Labour Government recognises the importance of building more and better infrastructure. In one of its mission 'milestones', it pledges "fast-tracking planning decisions on at least 150 major economic infrastructure projects" - an ambitious target.²⁰ Rachel Reeves, in her January 2025 speech on kickstarting economic growth, positioned infrastructure delivery at the forefront of the Government's plans.²¹ Accordingly, a range of actions are being taken to increase investment and make infrastructure projects easier and cheaper, including:

11 Ibid.

12 OECD, Improving Infrastructure in the United-Kingdom, 6 July 2015, [https://one.oecd.org/document/ECO/WKP\(2015\)62/En/pdf](https://one.oecd.org/document/ECO/WKP(2015)62/En/pdf)

13 Goss D and O'Brien A. Flowing Forward: Safeguarding the UK's water system. Demos. 5 December 2023. https://demos.co.uk/wp-content/uploads/2023/12/Flowing-Forward_Report_Affinity.pdf

14 Environment Agency. Water resources 2023-2024: analysis of the water industry's annual water resources performance. 7 October 2024. <https://www.gov.uk/government/publications/water-resources-2023-2024-analysis-of-the-water-industrys-annual-water-resources-performance>

15 Kelly R. We haven't always got it right but the cost of inaction is huge. Water UK. 11 October 2023. <https://www.water.org.uk/news-views-publications/views/we-havent-always-got-it-right-cost-inaction-huge>

16 Thames Water. Thames Water accelerates plans to secure South East's future water supply. 5 June 2024. <https://www.thameswater.co.uk/news/thames-water-accelerates-plans-to-secure-future-water-supply>

17 Burn-Murdoch J. The Nimby tax on Britain and America. FT. 25 August 2023. <https://www.ft.com/content/9aa0fcc0-31fb-44be-b5a0-57ceb7fb7a52>

18 Britain Remade. Back to What We're Good At. <https://www.britainremade.co.uk/plan>

19 Owens R. Overcoming the challenges of financing retrofit in the UK: A pathway to net zero. Wales Centre of Public 12 December 2024. <https://wcpp.org.uk/commentary/overcoming-the-challenges-of-financing-retrofit-in-the-uk-a-pathway-to-achieving-net-zero/>

20 Prime Minister's Office: 10 Downing Street. Plan for Change: Milestones for Mission-Led Government. 5 December 2024 https://assets.publishing.service.gov.uk/media/6751af4719e0c816d18d1df3/Plan_for_Change.pdf

21 Reeves R. 'Chancellor vows to go further and faster to kickstart economic growth'. 29 January 2025. <https://www.gov.uk/government/speeches/chancellor-vows-to-go-further-and-faster-to-kickstart-economic-growth>

STRATEGY

- A national 10-year infrastructure strategy is planned for Spring 2025
- An Industrial Strategy (Invest 2035) was published in Autumn last year
- The National Infrastructure and Service Transformation Authority (NISTA) – resembling a body recommended by Demos – will launch in Spring 2025 and oversee the infrastructure strategy
- A new Minister for Investment has been appointed
- The Office for Investment will get additional resources

FINANCE

- Public investment in infrastructure was increased in Autumn Budget 2024
- The National Wealth Fund was formed to support delivery of and investment in the wider Industrial Strategy, including infrastructure, in areas where an undersupply in private finance exists
- GB Energy was formed to invest in energy infrastructure and crowd-in private investment
- The International Investment Summit was hosted to attract foreign investors
- Pension funds will be consolidated to encourage more investment in large domestic projects
- The fiscal rules were changed to provide more room for investment

RESOURCES

- Skills are being developed through the creation of Skills England
- Access to energy is being increased through reforms to the National Grid
- 'Grey belt' land is being opened up for development

DELIVERY

- The National Planning Policy Framework is being reformed to facilitate infrastructure planning
- A new Nature Restoration Fund will help infrastructure developers meet nature obligations faster
- The ability to contest infrastructure projects in courts is being restricted
- New developments and investment have been permitted (e.g. on reservoirs and Heathrow runway)

Each of these reforms and strategies have a critical role to play in improving the funding and delivery of UK infrastructure projects. Nonetheless, more will need to be done to build on this promising start, to remedy decades of dwindling private investment and inefficient government investment.

SECTION TWO

THREE PRINCIPLES FOR REFORM

1. Clarity: The UK needs a clear vision for infrastructure around which key stakeholders can unite

The government is developing several new strategies and reforms to reshape UK infrastructure. However, they will be most effective if they form a coherent vision, with aligned and mutually reinforcing objectives.

Major infrastructure projects are highly complex, requiring long-term collaboration and trade-offs across a wide range of stakeholders. It is essential that the government leads these stakeholders and their work effectively, but has often failed in the past to successfully manage the complexities, leading to fragmented and under-prepared supply chains, misaligned incentives across stakeholders, uncertainty around how to manage trade-offs, service providers not empowered to take decisions, and a failure to learn and evolve across projects.²²

2. Certainty: There must be long-term certainty on infrastructure strategy and finance

Major infrastructure projects in the UK take 12.6 years to complete on average and cost £5.6bn.²³ They require long-term planning and resourcing, which can only be achieved if businesses and public authorities have a high degree of certainty about what is needed and how it will be paid for. A greater sense of financial certainty will help smooth procurement planning, and in turn, mitigate problems in the relevant supply chains.

In recent decades, however, government attempts to provide longer-term certainty have instead continued disruptive cycles. Fresh long-term plans - introduced at great cost - continue to be

²² National Infrastructure Commission. Cost drivers of major infrastructure projects in the UK. October 2024. <https://nic.org.uk/app/uploads/NIC-Costs-Report-Final-Oct-2024.pdf>

²³ Infrastructure and Projects Authority. Annual Report on Major Projects 2023-24. 31 March 2024. https://assets.publishing.service.gov.uk/media/67863b593a9388161c5d2379/IPA_Annual_Report_2023-24.pdf

scrapped and renewed again in the short-term. The Government's new Industrial Strategy, Invest 2035, is the twelfth industrial strategy since 2010.²⁴ Finance has also been uncertain; there were five spending reviews from 2013 to 2021, with all but one starting fresh assessments about whether to fund new and on-going capital projects.²⁵ A new approach is needed to ensure current government strategies do not follow these trends - one that provides more long-term strategic and financial certainty for businesses.

3. Collaboration: The public must be meaningfully engaged

A national vision for infrastructure must be supported and assisted by the UK public. This means upskilling the workforce so they can help deliver infrastructure projects, and ensuring affected communities have their views balanced with national interests in a more meaningful and less combative way.

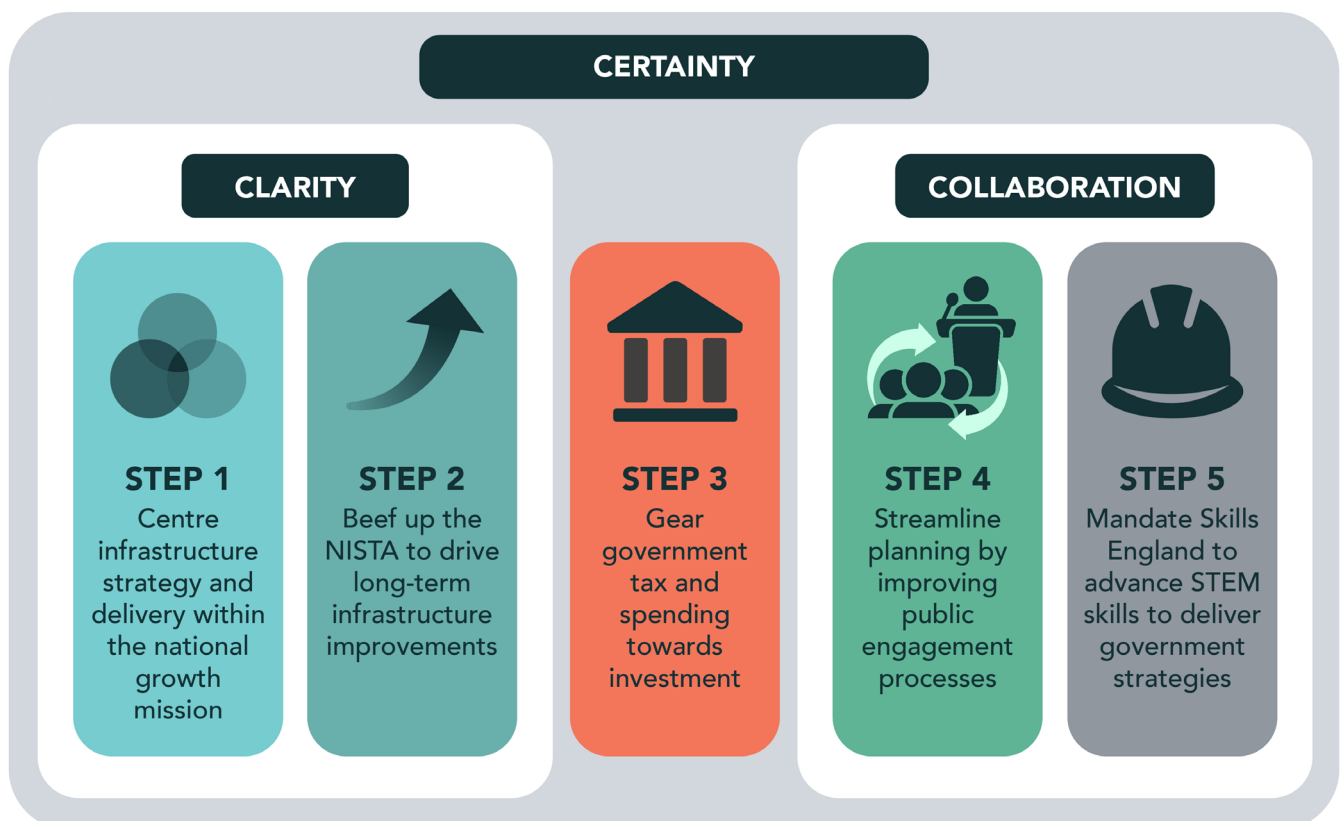
²⁴ Dobb G and Jung C. Rock bottom: Low investment in the UK economy. IPPR. 18 June 2024. https://ippr-org.files.svdcdn.com/production/Downloads/Rock_bottom_June24_2024-06-18-081624_arsv.pdf

²⁵ National Infrastructure Commission. Cost drivers of major infrastructure projects in the UK. October 2024. <https://nic.org.uk/app/uploads/NIC-Costs-Report-Final-Oct-2024.pdf>

SECTION THREE

FIVE STEPS TO BOOST INFRASTRUCTURE INVESTMENT

To ensure it delivers the clarity, certainty and collaboration needed for radical infrastructure transformation, we have identified five further steps that the Government must take.



1. CENTRE INFRASTRUCTURE STRATEGY AND DELIVERY WITHIN THE NATIONAL GROWTH MISSION

The Institute for Government (IfG) believes the Government's five Mission Boards have "not yet gripped their tasks."²⁶ To help do so, the Government should build, within the Growth Mission, a 'Mission Strategy Team' on infrastructure to give it a strong, cross-cutting position within the centre of government.

Mission Strategy Teams - as recommended by Nesta and the IfG - would be small and agile units to coordinate between the many projects and plans within the Mission. The Team would ensure infrastructure achieves and maintains the attention it needs within the Government, and facilitate communication and alignment across different government departments, interministerial groups, official bodies, and strategies. To embed the Government's vision for infrastructure across the supply chain, it should engage closely with NISTA, GB Energy and the National Wealth Fund - organisations that are closer to the ground in the delivery and finance of major projects - providing direction from the centre of government, while supporting learning and adaptation. To strengthen long-term certainty in the infrastructure strategy, the Team should also make sure that:

- The upcoming infrastructure strategy meets the level of ambition needed to deliver the Government's wider objectives.
- The infrastructure strategy is aligned with relevant regulatory reforms made by the Government, such as reforms to competition and environmental regulation.
- National Policy Statements (NPSs) on infrastructure - which outline the Government's objectives for major infrastructure development and against which nationally significant infrastructure projects (NSIPs) are assessed - are clear, and updated every five years to reflect the changing policy environment.²⁷ If updated NPSs are presented to parliament for approval every five years, there could perhaps be justification to make them immune from judicial review.²⁸

2. BEEF UP NISTA (THE NATIONAL INFRASTRUCTURE AND SERVICE TRANSFORMATION AUTHORITY) TO DRIVE LONG-TERM INFRASTRUCTURE IMPROVEMENTS

The newly formed NISTA could play a vital role in boosting clarity and certainty for infrastructure stakeholders - ensuring alignment between the Government's vision, the infrastructure strategy, and project delivery on the ground. To realise that potential, the Government must provide it with the powers and responsibilities required. These include:

- Setting infrastructure investment benchmarks, which lay out how much and what kind of investment is needed to meet our infrastructure needs, particularly given new house building plans. They should monitor performance of infrastructure investment against those benchmarks.
- Supporting the development and review of implementation plans for all major public infrastructure projects, including support on supply chain preparedness. The National Infrastructure Commission highlighted a gap in support for the Government regarding "how to translate a strategy into sequenced implementation plans".²⁹ NISTA should take up this role.

²⁶ Worlidge J et al. Whitehall Monitor 2025. Institute for Government. January 2025. <https://www.instituteforgovernment.org.uk/sites/default/files/2025-01/whitehall-monitor-2025.pdf>

²⁷ Planning Inspectorate. Nationally Significant Infrastructure Projects: National Policy Statements. 1 January 2012. <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-national-policy-statements>

²⁸ Pinsent Masons. Judicial review reform 'one step' to enabling UK infrastructure development. 24 January 2025. <https://www.pinsentmasons.com/out-law/news/judicial-review-reform-one-step-uk-infrastructure-development>

²⁹ National Infrastructure Commission. Cost drivers of major infrastructure projects in the UK. October 2024. <https://nic.org.uk/app/uploads/NIC-Costs-Report-Final-Oct-2024.pdf>

CASE STUDY

NEW ZEALAND'S NATIONAL INFRASTRUCTURE AGENCY

New Zealand launched its National Infrastructure Agency (NIA) in December 2024 to replace Crown Infrastructure Partners, which focused only on administering funds. The NIA will, with additional staff and funding, take on a more prominent role in long-term strategy and delivery. It will identify infrastructure priorities for the next three decades, acting as the Government's shopfront to facilitate private investment, and partnering on projects.³⁰ The engineering consultancy WSP explained that "By aligning the efforts of various stakeholders and fostering a culture of innovation, the NIA has the potential to transform the way infrastructure is planned, funded, and delivered in New Zealand".³¹

3. GEAR GOVERNMENT TAX AND SPENDING TOWARDS INVESTMENT

Public investment makes up almost two-thirds of infrastructure investment and can crowd-in private finance.³² To ensure value-for-money - and crowd-in rather than crowd-out private finance - the Government must provide long-term certainty on this investment, use it strategically to target the missions, and remove blockages to investment in the tax system.

First, the Government should pledge a two-parliament settlement for public investment which guarantees a minimum spend as a % of GDP (at a level which meets the investment requirements in the upcoming infrastructure strategy). Just as the Government is reportedly considering a 10-year social housing rent settlement to give landlords the confidence to invest, a public investment settlement would give businesses the confidence to invest.³³ This could provide greater certainty for the relevant supply chains and procurement planning, in turn making economies of scale more viable.

Second, within its public-private partnerships (procurement contracts, grants, tax breaks, equity investments), the Government should use investment conditionalities to advance its infrastructure mission (e.g. conditions on profit-sharing or reinvestment). Lessons should be learnt from the UK's COVID-19 vaccine, whereby the Government invested in the AstraZeneca vaccine on the condition that post-pandemic royalties are reinvested in medical research.³⁴

Third, the Government must remove disincentives to investment within the tax system. A critical step would involve introducing an 'investment allowance' for capital gains tax. This would mean investors just making 'normal returns' (e.g. at the interest rate on government bonds) would pay

30 McNaught D. IPW: New Zealand details new infrastructure plan and agency. Institution of Civil Engineers. 5 September 2024. <https://www.ice.org.uk/news-views-insights/inside-infrastructure/ipw-nz-details-new-infrastructure-plan-and-agency>

31 Edmondson C. The National Infrastructure Agency - A new era for Aotearoa New Zealand's infrastructure. WSP 15 September 2024. <https://www.wsp.com/en-nz/insights/a-new-era-for-infrastructure>

32 Office for Budget Responsibility. Economic and fiscal outlook. October 2024. https://obr.uk/docs/dlm_uploads/OBR_Economic_and_fiscal_outlook_Oct_2024.pdf

33 Simpson, J. Social housing rents to rise as part of UK chancellor's push to build affordable homes. The Guardian. 21 August 2024. <https://www.theguardian.com/society/article/2024/aug/21/social-housing-rents-to-rise-uk-affordable-housebuilding-rachel-reeves>

34 Mazzucato M and Rodrik D. Industrial Policy with Conditionalities: A Taxonomy and Sample Cases. Institute for Innovation and Public Purpose and The Reimagining the Economy Project. April 2024. https://www.ucl.ac.uk/bartlett/public-purpose/sites/bartlett_public_purpose/files/industrial_policy_with_conditionalities_a_taxonomy_and_sample_cases.pdf

no tax, incentivising greater investment.³⁵ 40% of capital gains tax payers would no longer pay the tax, and lost revenues could be recovered by increasing its rates.³⁶

CASE STUDY³⁷

UNITED STATES CHIPS AND SCIENCE ACT

The US's CHIPS and Science Act (2022) was a huge programme of investment, providing over \$52 billion to the semiconductor industry and \$200 billion to science and innovation. Critically, investments came with a range of conditionalities for recipients, including requirements to stop expanding manufacturing in countries of concern for 10 years, commit to climate and workforce development plans, provide childcare, pay a living wage, and share returns over a certain amount with the Government - advancing wider economic and social objectives. Meanwhile, the investments crowded-in significant private finance.³⁸

4. STREAMLINE PLANNING BY IMPROVING PUBLIC ENGAGEMENT PROCESSES

Planning phases for the UK's major infrastructure projects are slower than in Germany, France, America, or the Eurozone as a whole - in large part due to extensive requirements for public consultation.³⁹ The consultation process itself is broadly objection based, and more than half of decisions on major infrastructure projects go to court. So while planning processes are, in theory, designed to facilitate public collaboration, in practice they create delays, add millions to costs, amplify risks and inhibit development - often based on objections which do not fully represent national or regional interests.⁴⁰

There is an opportunity to rationalise this process by bringing engagement "upstream" in the planning process, whereby a representative group of the public deliberate and agree upon principles for infrastructure development at a national- or strategic authority-level. This could drive a commensurate reduction in the combative "downstream" processes. Rather than having to adapt to an array of local objections after the design phase, developers could align with regional priorities from the outset. The Scottish Land Commission, for example, found unanimous agreement among industry experts that early engagement facilitated trust with communities, reduced objections (and therefore risks and costs), and helped avoid delays.⁴¹ This would enable a fairer collaboration with the public, ensuring concerns about infrastructure development are considered alongside the public's aspiration for national and regional growth.

35 This has been proposed by both the Institute for Fiscal Studies and the Centre for the Analysis of Taxation

36 Advani A et al. The productivity cost of low Capital Gains Tax rates. Centre for the Analysis of Taxation. October 2024. https://centax.org.uk/wp-content/uploads/2024/10/AdvaniHughsonInkleyLonsdaleSummers2024_ProductivityCostOfLowCapitalGainsTaxRates.pdf

37 Pamilih J. Industrial Policy with Conditionalities: U.S. CHIPS & Science Act. The Reimagining the Economy Project. 21 February 2024. <https://www.hks.harvard.edu/centers/wiener/programs/economy/our-work/reimagining-economy-blog/industrial-policy>

38 Mazzucato M and Rodrik D. Industrial Policy with Conditionalities: A Taxonomy and Sample Cases. Institute for Innovation and Public Purpose and The Reimagining the Economy Project. April 2024. https://www.ucl.ac.uk/bartlett/public-purpose/sites/bartlett_public_purpose/files/industrial_policy_with_conditionalities_a_taxonomy_and_sample_cases.pdf

39 Ruparel R. Reshaping British Infrastructure: Global Lessons to Improve Project Delivery. BCG. 7 February 2024. <https://www.bcg.com/united-kingdom/centre-for-growth/insights/reshaping-british-infrastructure-global-lessons-to-improve-project-delivery>

40 Symonds T and Geiger C. 'PM vows to curb 'Nimby' legal blocks on infrastructure'. BBC. 23 January 2025. <https://www.bbc.co.uk/news/articles/ce319jdy2q1o>

41 Scottish Land Commission. The Value of Early Engagement. June 2020. https://www.landcommission.gov.scot/downloads/5ee1fd11139d0_20200611%20SLC%20Report%20SUMMARY%20-%20The%20Value%20of%20Early%20Engagement.pdf

An opportune moment to engage the public is when land use priorities are determined for Spatial Development Strategies. These will be developed by Combined and Strategic Authorities in coming years - encouraging consideration of priorities such as economic growth - and local plans will then conform to them. These strategies could be delivered at pace: the Auckland plan - a 29-year spatial plan for the city of Auckland, New Zealand - was designed through engagement with more than 1,700 people, and a local government minister described it as “the fastest plan ever prepared in any city anywhere in the world”.⁴²

CASE STUDY

THE FRENCH COMMISSION NATIONALE DU DÉBAT PUBLIC

The French Commission Nationale du Débat Public (CNDP) was founded in the late 1980s following extensive local opposition to nationally important rail projects. It hosts local public debates on contentious major projects early in the development. The CNDP should be notified long before the project is detailed and then hosts a public debate process for up to four months, within the project area.⁴³ Some debates have taken the form of citizen juries. To ensure fairness, all participants are given help to produce leaflets to the same length and quality as the developer. A study suggested “The overall view of the CNDP and the behaviour changes it has induced is highly positive in France”, and the model is recommended by the IfG and Britain Remade.^{44,45}

5. MANDATE SKILLS ENGLAND TO ADVANCE STEM SKILLS TO DELIVER GOVERNMENT STRATEGIES

Action needs to be taken to address the skills shortage in the infrastructure supply chain. Last year, almost a third of construction employers said their key challenge was finding suitably skilled staff - and it is estimated that rising demand will require an additional 250,000 construction workers over the next five years.^{46,47} Meanwhile, over two thirds of companies involved in the electricity network reported tangible skills shortages in their organisation, and 80% of councils are reporting shortages in planning staff.^{48,49}

42 Participedia. “The Auckland Plan” Participatory Urban Planning (New Zealand). <https://participedia.net/case/475>

43 Marshall T. Learning from France: Using public deliberation to tackle infrastructure planning issues. *International Planning Studies*. 22 February 2016. <https://www.tandfonline.com/doi/abs/10.1080/13563475.2016.1140021>

44 Davies N, Atkins G and Slade D. How to transform infrastructure decision making in the UK. g Institute for Government. February 2014. https://www.instituteforgovernment.org.uk/sites/default/files/publications/IfG_infrastructure_decision_making_WEB.pdf

45 Britain Remade. Back to What We’re Good At. <https://www.britainremade.co.uk/plan>

46 CITB. Over 250,000 extra construction workers required by 2028 to meet demand. 15 May 2024. <https://www.citb.co.uk/about-citb/news-events-and-blogs/over-250-000-extra-construction-workers-required-by-2028-to-meet-demand/>

47 Ibid.

48 Environment Journal. Energy union: UK electricity grid upgrade will fail on skills shortage. <https://environmentjournal.online/energy/energy-union-uk-electricity-grid-upgrade-will-fail-on-skills-shortage/>

49 Home Builders Federation. Planning on Empty. February 2025. <https://www.hbf.co.uk/research-insight/planning-on-empty/>

As the Government has suggested, Skills England - the newly-developed arms-length body - should run with a review of the additional skills needed to deliver the infrastructure strategy and its project pipeline.⁵⁰ This must include an analysis of how skills supply will be affected by government activities on immigration. To drive progress, Skills England should publish time-bound targets for the development of STEM, project management and planning skills, outline strategies to achieve them, and monitor progress.

Skills England should lead a programme on advancing STEM skills, with efforts to integrate career guidance into STEM curriculums and apprenticeships (with the new foundation apprenticeships announced in Autumn 2024 offering a key opportunity) and ensure careers advisers have up-to-date knowledge of modern STEM careers.⁵¹ There is a significant opportunity for retraining the UK's growing population of older workers, who may be put off pursuing 'green' industrial careers due to lack of familiarity and doubts about job security.⁵²

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SECTION FOUR

GETTING INFRASTRUCTURE RIGHT - WHAT WOULD SUCCESS MEAN FOR THE UK?

By enabling clarity, strategic and financial certainty and public collaboration, the recommendations we outline will catalyse infrastructure delivery and boost the impact of the Government's promising first steps. This will help create a virtuous cycle between more efficient implementation and higher investment, both public and private.

The benefits of success could be transformative for the UK, as effective infrastructure is an essential component of all five of the Labour Government's Missions for national renewal. An NHS for the future (mission 5) will need new hospitals and state of the art treatment centres, while safer streets (mission 3) will require urban renewal and new community facilities to promote social capital. These developments will fall at the first hurdle without access to energy, transport, water, or telecommunications.

The benefits are particularly clear in the following policy missions:

BOOSTING GROWTH (MISSION 1)

Infrastructure is a key piece of the growth puzzle. It enables people, power, goods and services to move faster and at lower costs, in turn supporting new jobs, homes, industries and technologies. It also enables structural changes in the economy, such as the advancement of AI (which relies on water, energy, and telecommunications), of green energy supply (see recent government plans on nuclear energy) or of UK science and tech (supported by plans for the Oxford-Cambridge growth corridor) - all key industries in the fifth industrial revolution.

Accordingly, there is a long established, robust body of research demonstrating how infrastructure investment drives up growth; one 2024 study across 87 countries found that a 10% increase in physical infrastructure investment drives up GDP by 1% in the long-term - a significant boost given the UK's near-zero growth in recent quarters.⁵³

ACCELERATING NET ZERO AND CLIMATE RESILIENCE (MISSION 2)

Transforming the UK's infrastructure is critical for achieving the UK's net zero targets, not just by significantly reducing emissions from infrastructure itself, but also by helping other sectors (from hospitality and retail to freight and logistics) to reduce their emissions. For example, to deliver on net-zero, the Climate Change Committee has a target for the UK to more than double its electricity capacity by 2035, enabling electrification across an array of industries.⁵⁴ Yet, if we continue at the rate of growth in grid capacity between 2012 and 2022, the target won't be reached until 2084.

As well as mitigating climate change, our infrastructure must also build resilience against its impacts and support the climate resilience of households. With the rising threats of floods to transport or of storms to energy supply, upgrading our infrastructure is essential.⁵⁵ Better infrastructure will also be critical to protect households against threats such as droughts, with England expected to need a 25% boost to water supply by 2050 to mitigate drought risks.⁵⁶

GREATER REGIONAL EQUALITY (MISSION 4)

The UK is one of the most regionally unequal countries in the OECD, and infrastructure plays a key role in driving this.⁵⁷ Train passengers in the North spend around 40 minutes more per day on public transport than their counterparts in the South East, largely due to slower trains.⁵⁸ A lack of connectivity - road, rail and digital - hampers economic productivity and growth in the North. Such inequalities are set to continue through the green transition, as London - the most accessible region for EVs - has 221 chargers for every 100,000 people, while Northern Ireland has just 29.⁵⁹

The National Infrastructure Commission notes how improving infrastructure in regions that are lagging behind could significantly boost their economic productivity.⁶⁰ For example, with improved rail infrastructure, by 2045 Birmingham could have up to 61% more passenger arrivals during the morning peak than in 2019, Leeds up to 50% and Manchester up to 38%. This not only helps with labour market mobility, but also boosts local economies by increasing footfall and employment opportunities - regenerating hitherto isolated areas and communities.

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CONCLUSION

UK infrastructure is at a critical juncture. While decades of underinvestment and inefficiency has left our infrastructure in a dire state, the Government is rightly trying to turn the dial. A myriad of levers have been pulled to try and drive greater ambition, finance, resources, and efficiency - and time will tell whether these plans drive progress.

But this government is not the first to try and boost our infrastructure. If their efforts are to succeed where others have failed, they have to look beyond the standard playbook. For transformational change, the UK needs a complete gear change in its vision for infrastructure, its level of certainty on infrastructure strategy and finance, and the way it engages the public, their interests and their skills.

The reforms outlined in this briefing - centering infrastructure within the national growth mission, empowering NISTA, gearing tax and spending towards investment, streamlining planning processes through ambitious citizen engagement, and addressing skills shortages - offer a roadmap for more transformative change. These measures go beyond fixing what is currently broken; they aim to rise to the huge challenges the UK will face in coming decades.

Committing to this will not be easy. It means diverting attention and resources, and inevitably some will lose out. The stakes are high, but so are the rewards: **delivering better funded, more timely and cost effective infrastructure is central to every one of the Government's five missions to achieve national renewal. The UK cannot afford to wait.**

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