

# Rebuilding Britain

Unlocking growth from the UK's  
Infrastructure Strategy

# Foreword

The UK Government's 10-Year Infrastructure Strategy sets out a bold vision: deliver resilient, decarbonised and digitally enabled infrastructure to drive economic growth, strengthen communities and position the UK as a world-leading destination for infrastructure investment.

Intentionally ambitious, achieving that vision requires faster, smarter and more integrated delivery — harnessing public and private expertise, innovative funding, and AI models and tools.

As the world's most trusted global infrastructure leader, AECOM is ready to continue its partnership with the UK Government to help turn the Infrastructure Strategy's vision into reality.

We are proud of our more than 100-year legacy of success in the UK, applying our expertise to help deliver some of Britain's most ambitious projects across rail, aviation, energy, buildings, water, defence, data centres and the environment. Many of our projects are household names: Manchester's Metrolink, the Thames Tideway Tunnel, Crossrail, Heathrow, and the restoration of the Elizabeth Tower, one of the UK's most treasured landmarks.

Our record of infrastructure innovation is unparalleled, with more than 7,000 staff across 30 offices spanning all four nations of the UK. Our UK-created solutions are applied to infrastructure projects worldwide through a global network of more than 50,000 professionals.

We take UK expertise to the world — and leverage the world's experience in the UK. Across the full span of the UK infrastructure sector, we partner closely with central and local government to deliver on the national and regional priorities that drive the UK's growth agenda.

AECOM's vision and intent is to invest even further in the UK. Our global record in delivering some of the most complex and sensitive infrastructure projects equips us with the skills, experience and insight to drive economic growth, enable sustainable energy and strengthen national security — delivering value for UK taxpayers today while building the infrastructure that will serve its citizens for the next 100 years.



**Troy Rudd**  
Chairman and Chief Executive Officer



**Richard Whitehead**  
Chief Executive Europe & India

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# Executive summary

Drawing on our unparalleled global record of delivery, this paper brings together 10 fully implementable recommendations to help to turbocharge the government’s efforts to meet its ambitious infrastructure goals in this Parliament:

## 1 Accelerating project delivery

The government should:

- Appoint a minister with dedicated oversight of infrastructure policy who is responsible for driving strategic decision-making across all government departments and ensure that the National Infrastructure and Service Transformation Authority (NISTA) is properly resourced and empowered to make clear, strategic decisions to turn strategy into delivery.
- Pilot simplified consenting and planning regimes through exemplar projects to prove the concept of a faster approvals process.
- Create a ‘national-to-regional planning framework’ that clusters infrastructure types, encourages co-location and facilitates cross-sector integration.
- Incentivise early-stage investment in high-quality, multidisciplinary design within infrastructure projects to ensure that projects are well planned and well executed.

## 2 Embracing AI-first infrastructure delivery

The government should:

- Embrace the immediate and growing advances in AI to create more certainty on costs, timelines and quality in all aspects of project design and delivery.
- Integrate AI capabilities into programme development to streamline approvals, simulate outcomes and optimise delivery timelines, quality and value for money. Encourage the use of AI-driven project engineering and design, along with digital twins, to materially reduce the time required to deliver assets and the quantity of building materials used and promote real-time asset management to improve maintenance and enhance overall asset financial performance.
- Empower NISTA to collect and manage national infrastructure datasets and strengthen open data policies to drive collaboration.

## 3 Unlocking private investment to enable smarter delivery

The government should:

- Reimagine public-private partnerships to balance risk and reward, protecting public value while attracting high-quality private-sector partners.
- Build capacity across and within government departments to strengthen their role as ‘intelligent clients’, supported by advisory frameworks that provide technical assurance and expertise, and use AI-driven tools to reduce the time required to obtain regulatory approval to proceed to construction.
- Enhance the National Infrastructure Pipeline by providing detailed project information to allow investors to assess project readiness and financial opportunities.

# Introduction

The vision of the 10-Year Infrastructure Strategy can only be achieved if the government continues to drive change into the marketplace by removing the barriers to project delivery and focusing more intensely on programme execution.

Artificial intelligence capabilities developed in recent years have demonstrated transformational potential in addressing highly complex operational challenges. This technology enables significant reductions in both cost and carbon footprint, while also dramatically accelerating the process of identifying optimal solutions to tasks such as the engineering and design of infrastructure.

To realise these benefits, a government-led shift towards higher efficiency and reduced expenditure is essential.

This requires the removal of existing barriers and the promotion of a modernised, fit-for-purpose delivery process across the market. This paper outlines three key areas of recommendations that can support the existing reform efforts already underway.

- By putting these ideas into practice, we believe government can turbocharge efforts to meet and exceed ambitious infrastructure goals in this Parliament:
- Accelerate project delivery by strategically integrating projects, investing in good design, continuing planning reform efforts and embracing new delivery models
  - Making infrastructure programmes ‘AI-first’
  - Unlock private investment to enable smarter delivery

We are already implementing many of these approaches in our own work with clients — from the Northumberland Line to the Great Grid Upgrade, and national flood management programmes — these projects demonstrate concrete examples of how our suggested approaches can drive faster, more efficient and socially valuable infrastructure delivery.

We stand ready to support the government in realising their infrastructure-based growth endeavour that sees projects delivered on time, on budget and most importantly, with lasting societal benefits at their core.



# Accelerating project delivery

The government faces urgent challenges in delivering infrastructure fast enough to meet the ambitions outlined in the Infrastructure Strategy and to drive growth. Speeding up project delivery will be a key element to ensuring the highest return on the planned infrastructure pipeline. This approach has other benefits, namely it can be applied across sectors and play a critical role in achieving 2030 clean energy goals.

UK infrastructure programmes have the opportunity to be developed in a more integrated way than in the past.

Alignment with complementary missions such as decarbonisation, regional growth, innovation and public service reform can be achieved by harnessing advanced digital developments, including AI, and by investing in workforce development and regional capacity.

With modernised planning and permitting systems, the UK can create an infrastructure ecosystem that not only meets today's needs, but also drives long-term economic growth, social value and environmental benefit.

In particular, the Development Consent Order (DCO) process for Nationally Significant Infrastructure Projects (NSIPs) remains lengthy and intricate. While the Planning and Infrastructure Bill and recent environmental updates introduce welcome reforms, the DCO process will continue to be a bottleneck, and the success of these changes will depend on careful implementation and adequate resourcing.

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## Policy Recommendations

To accelerate delivery, the government should adopt an integrated approach:

### 1 Dedicated oversight:

The government should appoint a minister with dedicated oversight of infrastructure policy. This role would be mandated to ensure strategic alignment, coherence and accountability across all public infrastructure programmes. The government should consider appointing an industry expert with proven AI technological insights to this role to drive better outcomes across government and industry. This reform will strengthen coordination across departments, improve efficiency in infrastructure planning and delivery, and enhance the value from public investment.

### 2 Streamline consenting and planning:

The UK's consenting process is vulnerable to legal challenge and thus inefficient. Reducing duplication in environmental assessments, technical requirements and streamlining the consultation process, whilst still enabling participation, will be essential in preventing delays. The government has been making commendable progress with its planning reform agenda, but it must go further and faster, and the focus must now be on ensuring the reforms can translate into success through effective implementation and adequate resourcing. The government should pilot simplified consenting regimes through exemplar projects, demonstrating faster approvals, while maintaining environmental and community safeguards.

To ensure continuing and rapid progress in implementing the government's infrastructure programme, we also recommend that the government should look to implement strict delivery timetables, clear roadmaps for how each major project will be delivered, streamlined consultation processes that can still enable participation, and milestones for the completion of each key stage. Only by having such clarity, can ministers, officials, corporate partners and communities have confidence that projects are being delivered on time and budget.

### 3 Integration of infrastructure delivery:

Projects planned in isolation miss opportunities for system-level efficiency. For example, co-locating data centres with other types of infrastructure can allow waste heat from the data centre to be repurposed through a local heat network to power homes and businesses. Similarly, sharing large cooling systems by co-locating with nuclear also offers great potential. We welcome the introduction of Spatial Development Strategies (SDS) via the forthcoming Planning and Infrastructure Bill as a positive step towards encouraging co-location and integrated infrastructure planning.

To maximise the effectiveness of SDS, the government should use them to facilitate cross-sector integration, bringing together different stakeholders and industries to plan and deliver infrastructure in a way that considers local needs and resources. The government's existing approach to AI Growth Zones, for example, could be applied to other infrastructure types to attract investment. In addition, the government should consider coordinating and sequencing Nationally Significant Infrastructure Programmes to manage workforce and supply chain constraints effectively.

### 4 Investing in good design:

Government should incentivise early-stage investment in high-quality, multidisciplinary design within infrastructure projects. Historically, prevailing risk has discouraged investment in design beyond functional requirements. However, the Infrastructure Strategy and planning reforms provide greater certainty in delivery and create conditions for front-loaded design processes.

Deep-tech AI for early-stage planning and design is available in the market allowing for a fast and more precise early-stage decision basis. Leveraging these opportunities will de-risk projects, accelerate delivery and ensure infrastructure investment secures lasting social, environmental and economic value for communities.

## Recommendations in practice: Great Grid Upgrade

Upgrading the UK's electricity grid network to get clean power to both homes and businesses is a national priority. A streamlined yet robust DCO process will be critical to accelerating project delivery, but the sheer scale presents an unprecedented technical challenge.

We are proud to support National Grid's Great Grid Upgrade, a major programme to modernise and reinforce the UK's electricity transmission network to meet future energy demand and support net-zero goals. Our work enables the development of multiple project consents in a programmatic manner and has given us a deep

understanding of the challenges involved in delivering complex infrastructure programmes.

We believe that people, teams and tools are the building blocks to good DCO outcomes. If the UK is to succeed in modernising the grid at speed, those building blocks will need to sit on the strongest foundations — and that will depend on government, consultants and clients working together, united by a sense of urgency and common purpose.

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# Embracing AI-first infrastructure delivery

Traditional infrastructure delivery models are typically characterised by manual processes, siloed data and limited resources. These models limit successful delivery at the scale and complexity required by modern projects, and at the pace demanded by the government's missions for growth — in particular, where safety, speed and precision are essential. Without intervention, capacity and capability constraints

will continue to slow project delivery, inflate costs, limit innovation and discourage the next generation of talent from entering the sector.

We recognise that most of the challenges that emerge in project delivery are often identifiable and correctable at the earliest stages of investment. In doing so — and in creating solutions built around

this idea — we are solving our clients' challenges in smarter, faster ways.

This effort can be enhanced and accelerated by integrating advanced AI capabilities into successful delivery models. To realise the full potential of AI-first infrastructure delivery, we recommend the government adopt a practical, outcomes-focused approach built around the following recommendations.

## Policy Recommendations

### 1 AI-enabled planning and optimisation

Integrate industry-specific AI agents and tools into the earliest stages of programme development. This will mean that government and delivery bodies can streamline approvals, reduce delivery risk, and drive early efficiencies that cascade over the full delivery cycle. Industry-specific AI agents can solve the highly complex integrated designs with more optimal outcome, reducing both risk cost and carbon footprint. Doing so will enhance delivery timelines, quality and value for money across large portfolios, resulting in overall asset lifetime savings and create budget capacity. AI can help identify and prioritise risks, create action plans, forecast costs better, identify and manage resource needs more efficiently, and enable technical resources with reliable insights to make smarter decisions.

### 2 Digital twins and AI for real-time asset management

Digital twins enable rapid value optimisation across the full lifecycle of an infrastructure project, from planning, to design, construction and operations. With AI, the value of digital twins is even greater. Whether integrating real-time data into simulations, creating better operations and maintenance models with predictive analytics, or delivering lower energy consumption, AI and digital twins create new opportunities to operate assets smarter and more cost effectively.

### 3 Centralised and open infrastructure data

Empower NISTA to collect, manage and curate national infrastructure datasets and strengthen open data policies to allow innovation by small and medium-sized enterprises (SMEs), researchers and industry partners. A centralised, secure platform would facilitate the sharing of data, insights and delivery intelligence across programmes, improving collaboration, reducing duplication and enabling more informed policymaking. Open infrastructure data and AI agents can supercharge the efficiency of industry and reduce errors, risks and discrepancies due to data siloes and proprietary systems keeping essential data unavailable for alignment with complementary missions.

## Recommendations in practice: Environment Agency flood management

Through our experience in designing and deploying digital platforms, we understand the impact of an 'AI-first' infrastructure approach. Our work with the Environment Agency on flood management programmes demonstrated how detailed modelling and real-time data integration can substantially improve forecasting accuracy and accelerate response times, helping communities manage flood risks more effectively. We are also leading the way in other

key areas, including the establishment of an 'Underground Infrastructure AI Innovation Centre', focused on developing AI-powered solutions to improve data quality, enhancing the mapping of underground utilities and safeguarding underground space for existing and future developments.

Digital-first infrastructure is a critical enabler for delivering UK projects more quickly, efficiently, and with lasting value. By embracing AI,

centralising infrastructure datasets and focusing on tangible outcomes, government can overcome workforce capacity challenges, accelerate programme delivery, reduce costs and position the UK as a global leader in digital infrastructure. These recommendations directly address the rapid pace of development, which current systems struggle to keep up with, ensuring that the UK's infrastructure can adapt and thrive in an increasingly complex environment.



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# Unlocking private investment to enable smarter delivery

By combining the strengths of both traditional procurement and public-private partnership models involving private finance,

infrastructure programmes can be delivered more efficiently and faster. With better-aligned incentives and enhanced value for money, this

integrated approach also supports timely delivery and maximises outcomes that advance broader public objectives.

## Policy Recommendations

### 1 Reimagining public-private partnerships

By design, the government’s funding plans anticipate a role for private capital, making robust Public-Private Partnerships (PPPs) essential to closing the financing gap. Past approaches offer instructive lessons — particularly regarding taxpayer value-for-money — and demonstrate how innovation and flexibility can be embedded in contract design as the market and asset requirements evolve. New models should balance risk and reward, protecting public value while attracting high-quality private sector partners, and giving government — and by extension the taxpayer — confidence in project delivery and the reliability of commercial partners.

### 2 Enhancing government capability and confidence

Even when commercial risk is transferred, political risk can inhibit decisive action. We recommend capacity building within Whitehall departments to strengthen government as an “intelligent client”. This should be supported by advisory frameworks that provide technical assurance and expertise and use AI-driven tools to reduce the time required to obtain regulatory approval to proceed to construction. This approach creates a mutually beneficial outcome: an intelligent client secures a stronger commercial partner, while the commercial partner gains confidence to invest.

A great example of this is the Nature Risk Tool developed by the Sustainable Markets Initiative (SMI) and AECOM. SMI, created by His Majesty King Charles III in 2020, facilitates action on sustainability between global CEOs and world leaders. The SMI Nature Risk Tool enables planners, policymakers and investors to assess land globally, to identify habitats and biomes, and to evaluate environmental impacts early in the infrastructure planning process. By providing expert-reviewed insights and mitigation strategies, it supports sustainable development while reducing risks such as habitat loss, biodiversity decline, and pollution, allowing private sector investors to quickly assess infrastructure investment decisions.

### 3 Pipeline transparency and investor engagement

While the £725-billion National Infrastructure Pipeline lists projects individually, it lacks the detailed information that would give investors’ confidence in any single entry, limiting its attractiveness to those seeking a long-term pipeline of structured, investable opportunities. The private sector can play a strategic advisory role in prioritising and packaging projects, developing transparent pipelines, and providing tools that allow investors to assess project readiness and financing opportunities. Collaborative digital solutions and structured milestones can enhance clarity, strengthen investor confidence and accelerate delivery.



While historical mechanisms may be politically unpopular, there is growing appetite for innovative investment structures that balance risk and reward effectively.

## Recommendations in practice

As an organisation with experience across sectors and private finance models, from business case inception to hand back, and hydropower to housing, we possess detailed insight into what works — and we stand ready to advise the government with our expertise in the UK and internationally.

At the core of this approach is early, collaborative engagement between public and private actors. We advocate for integrated delivery teams from the outset, bringing together the best expertise from both sectors, and with input from the investor community to co-design, plan and implement infrastructure programmes. Aligning incentives across the entire project lifecycle ensures stronger coordination, improved performance and clear accountability.

This model provides the long-term certainty and strategic alignment needed to attract private finance into UK infrastructure and reassure the government that the project will deliver on time and on budget.

Through projects ranging from early-stage developments to current structures, such as Velindre Hospital in Wales where the public sector takes a stake, we have tracked the apportionment of risk across sectors and observed corresponding interest from the private finance community. These insights inform our internal philosophy and approach to projects, which we would be happy to discuss to support planning and decision-making over the next 10 years.

We also recommend exploring alternative funding models.

While historical mechanisms may be politically unpopular, there is growing appetite for innovative investment structures that balance risk and reward effectively. Measures such as government underwriting of financial risk can improve investor confidence.

We have witnessed alternative delivery in practice, through our role as a delivery partner to Northumberland County Council on the Northumberland Line — one of the UK’s largest third party-funded rail upgrades. Now serving over 500,000 passengers, the Northumberland Line demonstrates how local leadership, government and industry can combine to deliver truly transformative results, improving connectivity and opening up new housing, employment and investment opportunities.



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## About AECOM

AECOM (NYSE: ACM) is the global infrastructure leader, committed to delivering a better world. As a trusted professional services firm powered by deep technical abilities, we solve our clients' complex challenges in water, environment, energy, transportation and buildings. Our teams partner with public and private-sector clients to create innovative, sustainable and resilient solutions throughout the project lifecycle — from advisory, planning, design and engineering to programme and construction management. AECOM is a Fortune 500 firm that had revenue of \$16.1 billion in fiscal year 2024. Learn more at [aecom.com](https://aecom.com).