

The Secrets Behind the Incredible Speed of Chinese Megaproject Delivery

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25 September 2026, Oslo

Chinese Speed

Published: 05:53, May 30, 2024

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Huairou Science City cachet

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Ben Marlow

'Can't-build' Britain has become a global



@Zaubereiminister 6 months ago

Germany, Stuttgart, a train station being build since 2010 at least until 2030 and costs 11 billion so far.



3



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@cerellitv2978 7 months ago

The railway at the end with its 72 tunnels and 93 bridges will be finished before the paperwork for a single bridge or tunnel is done.



299



Reply



@JD-lp5rw 7 months ago

Meanwhile in the UK: 5 years and 100 million to build a mini roundabout.



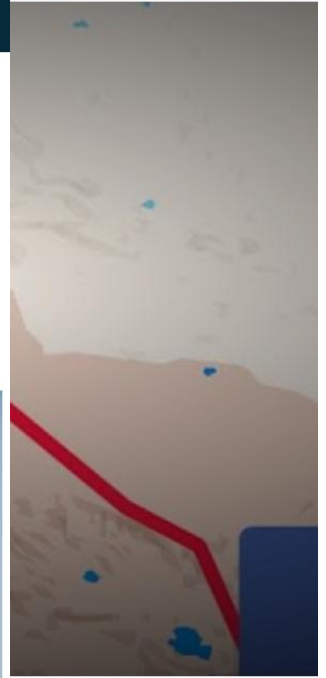
283



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The Sizewell C nuclear power plant construction site. There hasn't been a nuclear plant constructed in the UK for three decades. Credit: Chris Radburn/Reuters



ail network is now in China.

宁波北仑

China's Mega Projects Shocked American Engineers |

more

What do we mean by “speed”?

Not just faster construction

- From strategic decision to project approval
- From approval to construction and commissioning
- From completion to beneficial use

**Governance affects time *before* and
after the construction site**

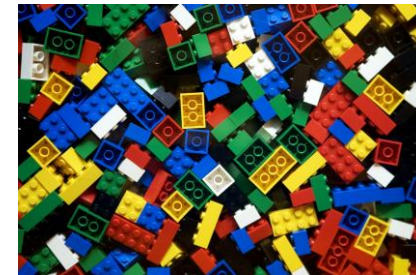
The “Western eyes” Perception on Chinese Speed

Fast
Cheap
Disposable

“Made in China”



“Lego construction”



Does speed necessarily mean sacrificing quality or long-term value?

2010→ 2025: 15 years of high-speed railway development



China Railway High-speed (CRH) bullet train

CHINA

~42,000 km

Additional high-speed railway in operation



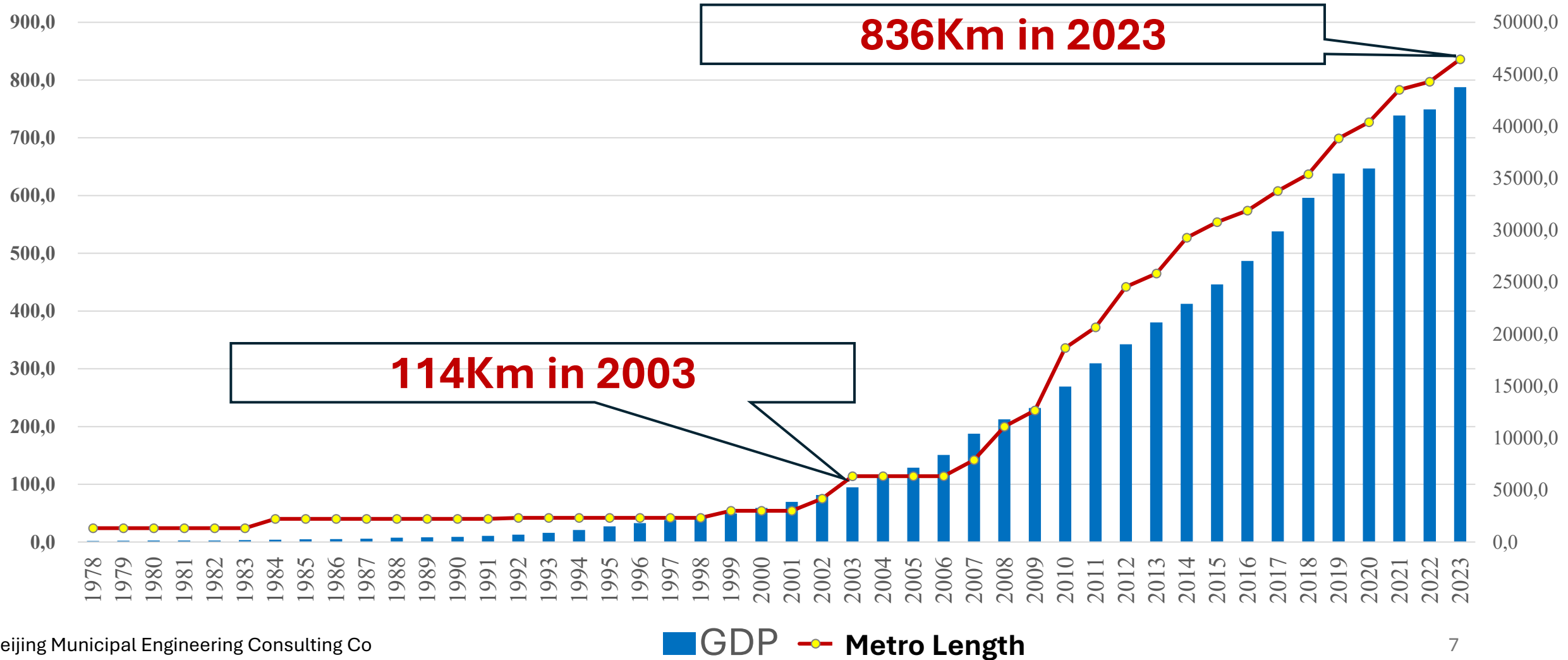
Construction of the Wendover Dean Viaduct, a railway bridge being built for HS2

UNITED KINGDOM

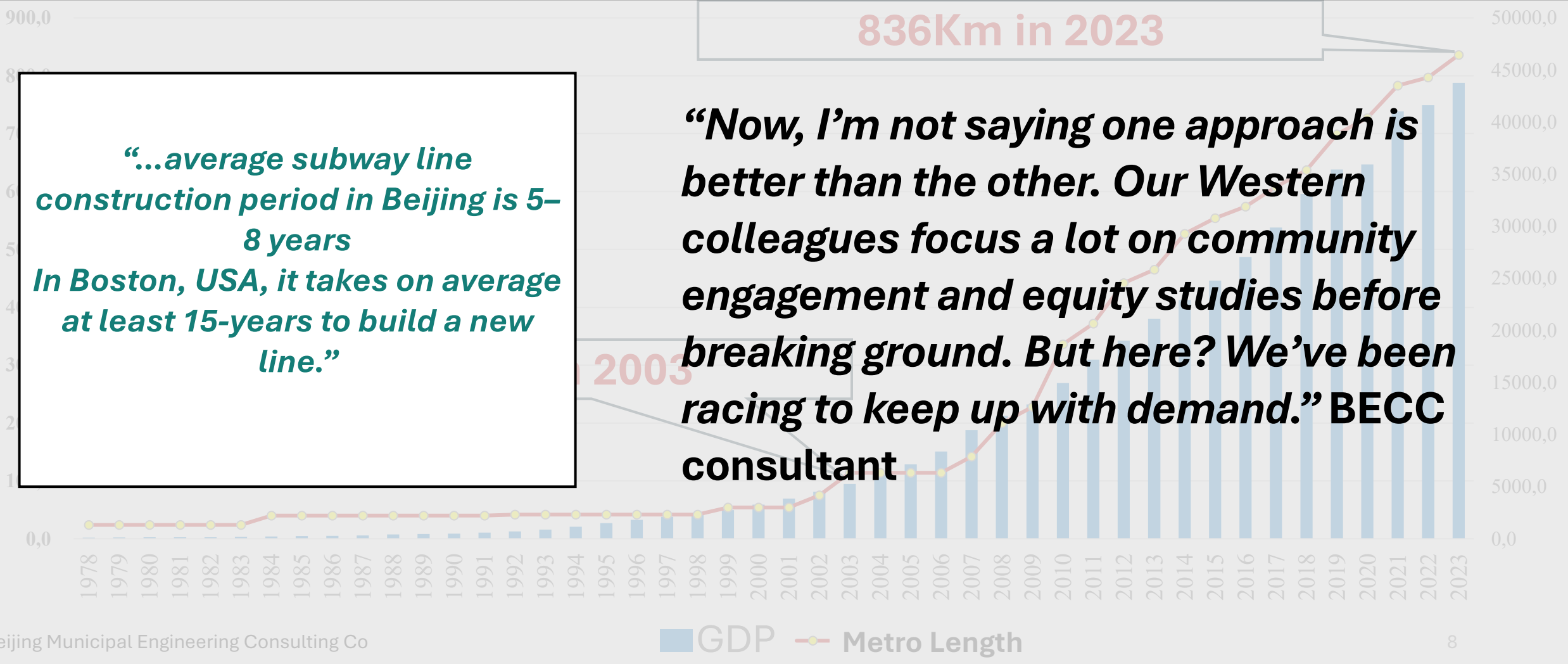
0 km

Additional high-speed railway in operation

Beijing's metro system expanded from 114 km in 2003 to 836 km in 2023, over 700 km growth in 20 years.



Beijing's metro system expanded from 114 km in 2003 to 836 km in 2023, over 700 km growth in 20 years.



The real question is why

The construction site is where speed becomes visible

Could governance may be where it is created?

Evidence from four China megaproject field visits

FOUR MEGAPROJECTS

- Huairou Large Scale Scientific City - Beijing
- Beijing Sub-station Railway Transportation Hub
- Shenzhen Qianhai New Town
- Hong Kong-Zhuhai-Macao Bridge

Research programme partners



- ~50 explorative Interviews & Informal talks with government officials, project managers, engineers, architects, contractors, end-users, scientific advisors
- Site visits
- Organisation & Project documentation

FOUR MEGAPROJECTS

HUAIROU SCIENCE CITY

Scientific infrastructure

BEIJING SUB-CENTER STATION TRANSPORTATION HUB

Integrated transport

QIANHAI, SHENZHEN

Urban development

HONG KONG–ZHUHAI–MACAO BRIDGE

Cross-jurisdictional connectivity

Research Findings

Four governance mechanisms

01

STRATEGIC CONTINUITY

Long-term pipeline and relationships

02

INSTITUTIONAL CAPABILITY

Enduring institutions that extend the life of a single project

03

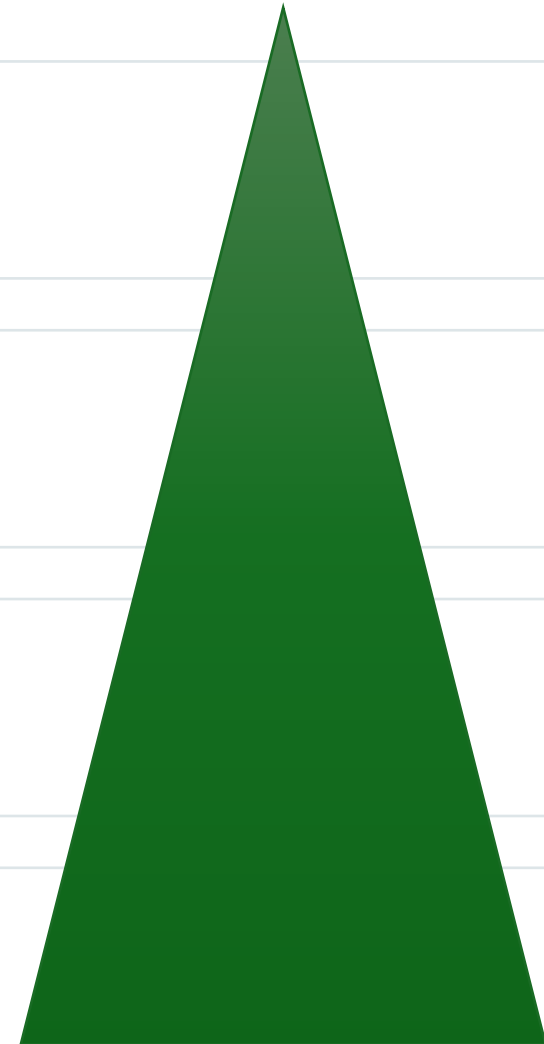
SUPPLY-CHAIN ACCOUNTABILITY

Contracting rules, credit records & blacklisting

04

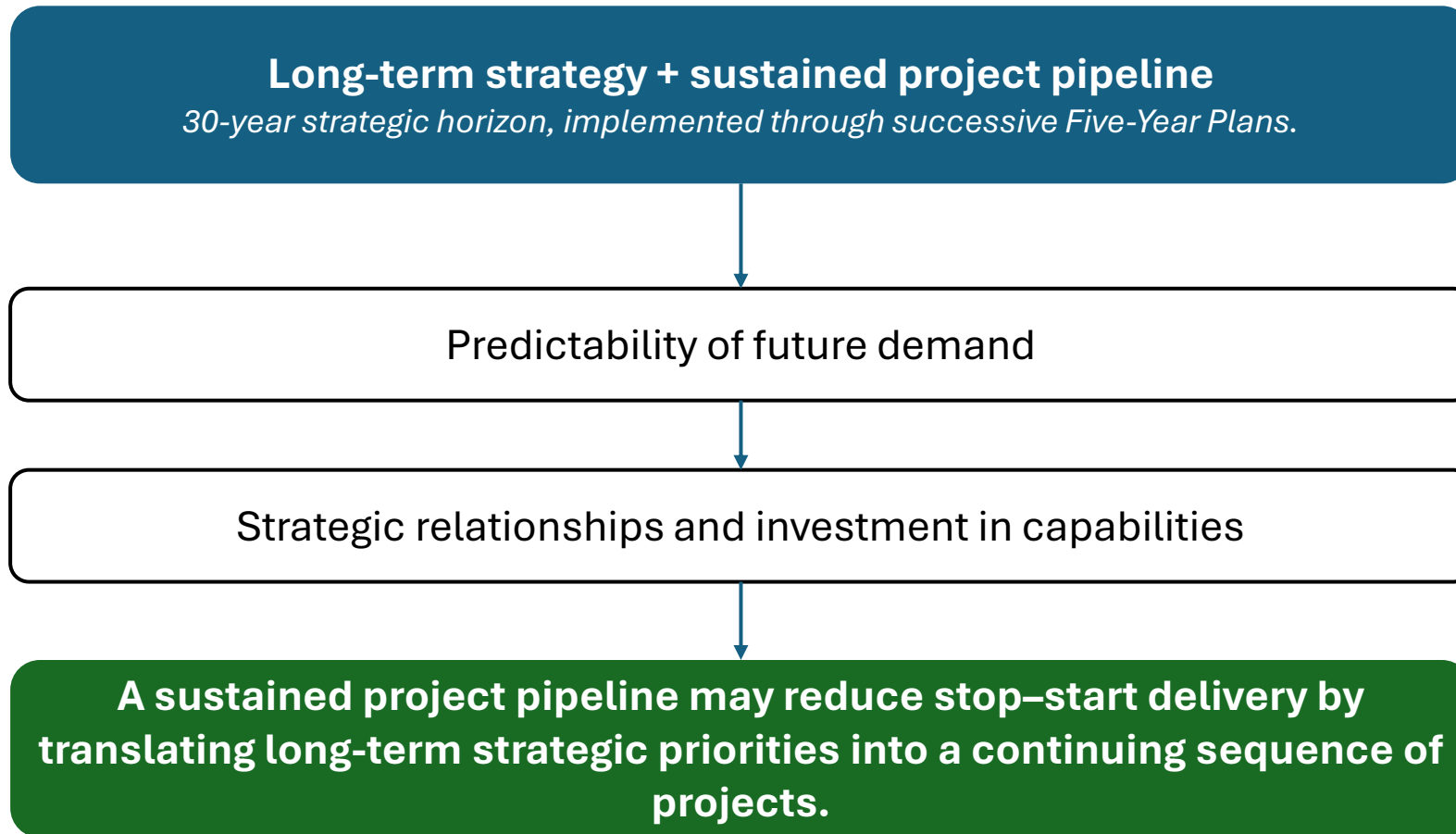
INTEGRATION FOR BENEFICIAL USE

Asset integration and operational readiness



MECHANISM 1

Strategic continuity builds delivery capability



Case	Long-term strategic horizon	Five-Year Plan / staged implementation	Evidence of a project pipeline / sequence
Huairou Science City	Explicit milestones: 2020, 2025, 2035 and 2050. By 2035 internationally renowned science city; by 2050 world-leading science city.	Individual science infrastructure is explicitly associated with Five-Year Plan programmes; e.g. supporting infrastructure is categorised under the CAS 13th Five-Year Plan.	Development is explicitly framed around constructing batches of major science infrastructure/platforms, attracting institutions and undertaking major projects.
Beijing Sub-Center Station / Hub	The wider Beijing master plan runs to 2035; the station-area plan explicitly sets 2025 and 2035 objectives.	The station is explicitly included in Beijing's 14th Five-Year major-infrastructure and transport plans.	It sits among a portfolio of stations, railways, metro lines and supporting infrastructure. The Tongzhou FYP distinguishes projects to build/start from lines to “reserve” for later implementation.
Qianhai New Town	Qianhai sits within Shenzhen's 2021–2035 spatial plan, with 2025, 2035 and a 2050 outlook. Qianhai itself has a 2035 development objective.	Shenzhen's 14th FYP translates this into named infrastructure projects.	The FYP lists projects at different stages: complete, accelerate construction, commence, undertake preparatory work, and study/plan. Qianhai itself appears within a much larger transport/infrastructure programme.
Hong Kong–Zhuhai–Macao Bridge	Different		

Managing strategic relationships in inter-organisational projects

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ABSTRACT

Project management literature and project-driven industries such as construction advocate for transforming relationships in construction projects from transactional to strategic. However, the dominance of Transaction Cost Economics (TCE) as the prevailing paradigm in relationship management in inter-organisational projects has confined most relationships to one-off projects, fostering short-termism and transactional interactions, rather than long-term partnerships built on trust. This short-term focus often leads to project underperformance, highlighting TCE's limitations in managing complex, long-term inter-organisational project relationships. To tackle this issue, this research explores and operationalizes a seven-dimensional framework that builds on Relational Exchange Theory (RET) to analyze how strategic relationships are manifested across four significant inter-organisational projects in the UK, considered exemplars of building strategic relationships. Our research contributes to the theoretical elaboration of RET by proposing several theoretical propositions and a provisional model for managing strategic relationships in inter-organisational projects.

ARTICLE HISTORY

Received 6 June 2025
Accepted 19 August 2025

KEYWORDS

Relationship management;
Relational Exchange Theory;
strategic relationships;
construction



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Project Leadership and Society

journal homepage: www.sciencedirect.com/journal/project-leadership-and-society



Policy Essays

Can strategic relationships counter short-termism in infrastructure delivery? Evidence from the UK

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ARTICLE INFO

Keywords:

Short-termism
Governance
Project management
Policy
Collaboration
Inter-organisational relationships
UK

ABSTRACT

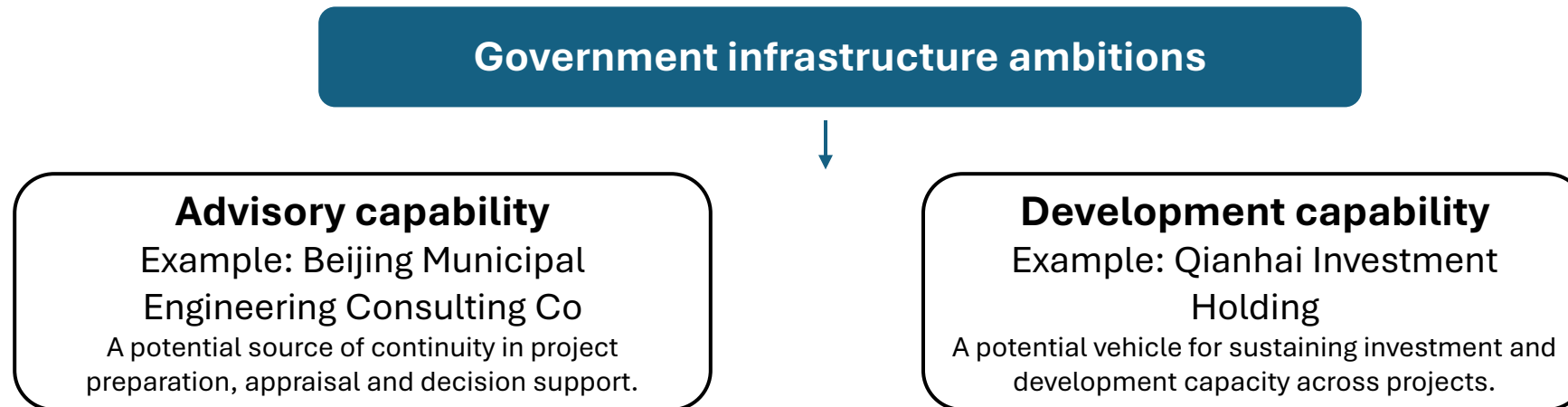
Government short-termism in infrastructure development undermines market confidence, weakens delivery capability, and erodes institutional credibility. It also creates relational failures, resulting in weak, unstable, or adversarial relationships that inhibit long-term thinking and contribute to poor project performance. This policy note argues that strategic relationships provide a practical mechanism to address these relational failures. Drawing on a qualitative multi-case study of four major UK infrastructure programmes, it develops a three-stage framework: relationship development, establishment, and measurement, showing how such relationships can be built and sustained. The findings offer actionable recommendations for policymakers seeking to improve infrastructure delivery and counter the effects of short-termism.

	Themes	Key findings
<i>Development</i>	1. Partner selection	1.1. A relational approach to procurement
		1.2. A long-term relationship vision
		1.3. 'Pre-formed' vs 'Post-formed' coalitions
	2. Nature of the contract	2.1. The use of Relational contract
		2.2. Collective ownership through shared incentives
<i>Establishment</i>	3. Understanding each other	3.1. Time and effort are required for relationship development
		3.2. The use of integrated leadership
	4. Interpersonal relationships	4.1. Team player selection based on behaviours
		4.2. Talent development based on behaviours
	5. Ways of working	5.1. One-team culture based on collaborative behaviours
		5.2. The use of Integrated mechanisms, processes & teams
<i>Measurement</i>	6. Dealing with problems	6.1. A Problem-solving attitude
		6.2. Innovation as the main approach to problem solving
	7. Performance Management	7.1. Lack of standard relationship measurements
		7.2. The use personal judgement to assess relationships

MECHANISM 2

Institutions that turn strategy into delivery

Long-term ambition needs organisations capable of carrying it forward.



Beijing Municipal Engineering Consulting Company:

a state-owned enterprise, BECC is involved in almost every infrastructure mega-project in Beijing. Client portfolio: the Government, private developers, and NGO.

- Design standards
- Learning



Universal Studios
Investment :37 billion CNY
Project Consulting Service



New Panda Center
Investment :1.3 billion CNY
Project Consulting Service



Capital Medical University
Investment :5.9 billion CNY
Project Consulting Service



Lize Business District
Investment :6 billion CNY
Land Use Consulting Service



Beijing sub-city Transportation Center
Investment :318 billion CNY
Project Consulting Service



Liang Ma Riverfront
Investment :1billion CNY
Landscape Consulting Service

Qianhai Investment Holding (Shenzhen Qianhai Construction & Investment Holding Group Co., Ltd.) is the primary state-owned vehicle driving infrastructure, urban development, and industrial complexes in the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone.

Established in 2011 to translate Qianhai's development strategy into projects

Permanent institutional mandate

- Land development
- infrastructure
- major-project investment

Portfolio, not single project

400+ projects / ~RMB 80bn investment

Capacity retained across projects

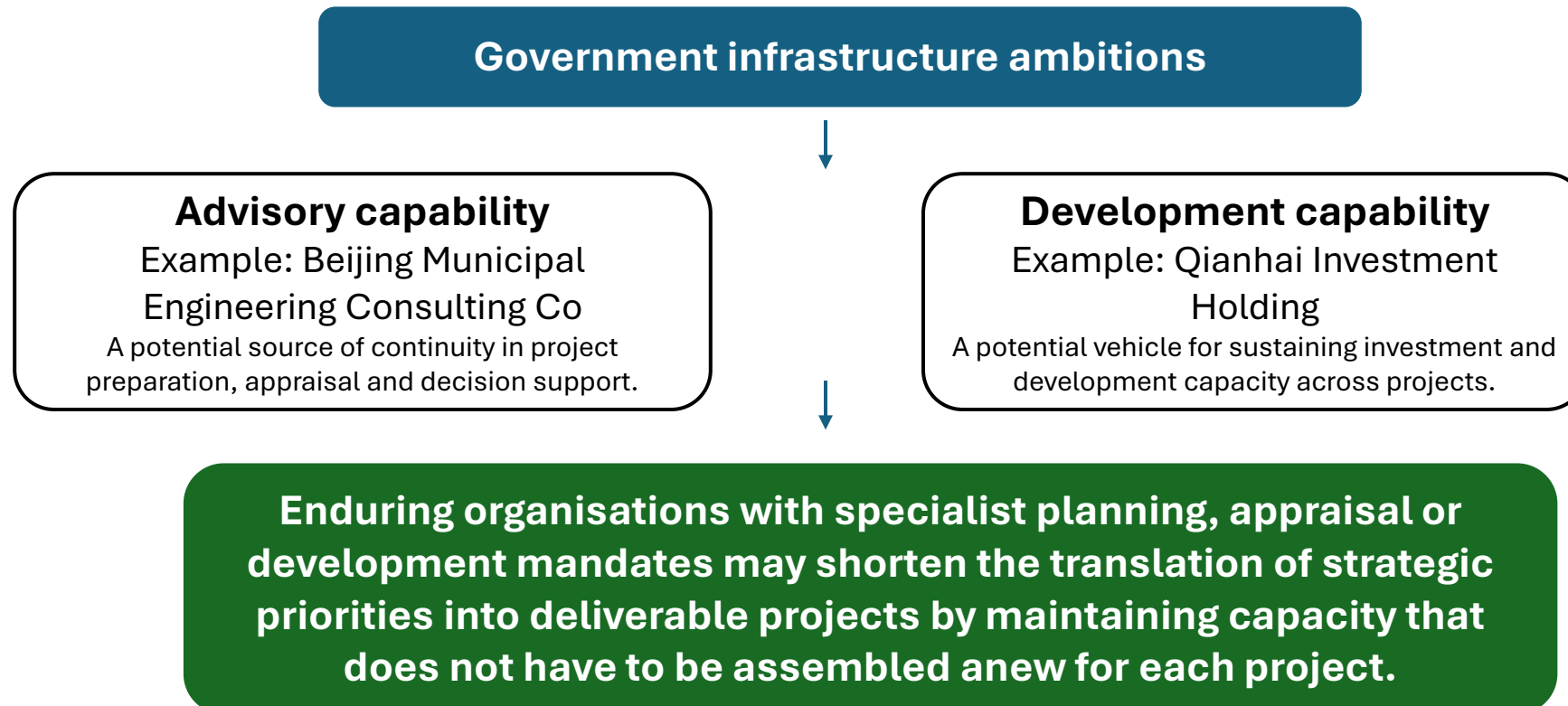
Operates across municipal/public infrastructure, energy, housing, industrial space and supporting service



MECHANISM 2

Institutions that turn strategy into delivery

Long-term ambition needs organisations capable of carrying it forward.



MECHANISM 3

Accountability beyond the project

Delivery performance may shape a contractor's future opportunities—not just its current contract.

Credit and compliance records

Performance is recorded beyond the immediate project

Future tender eligibility

A contractor's record may affect access to subsequent work

Subcontracting controls

Limits on passing work further down the chain may help preserve identifiable responsibility.

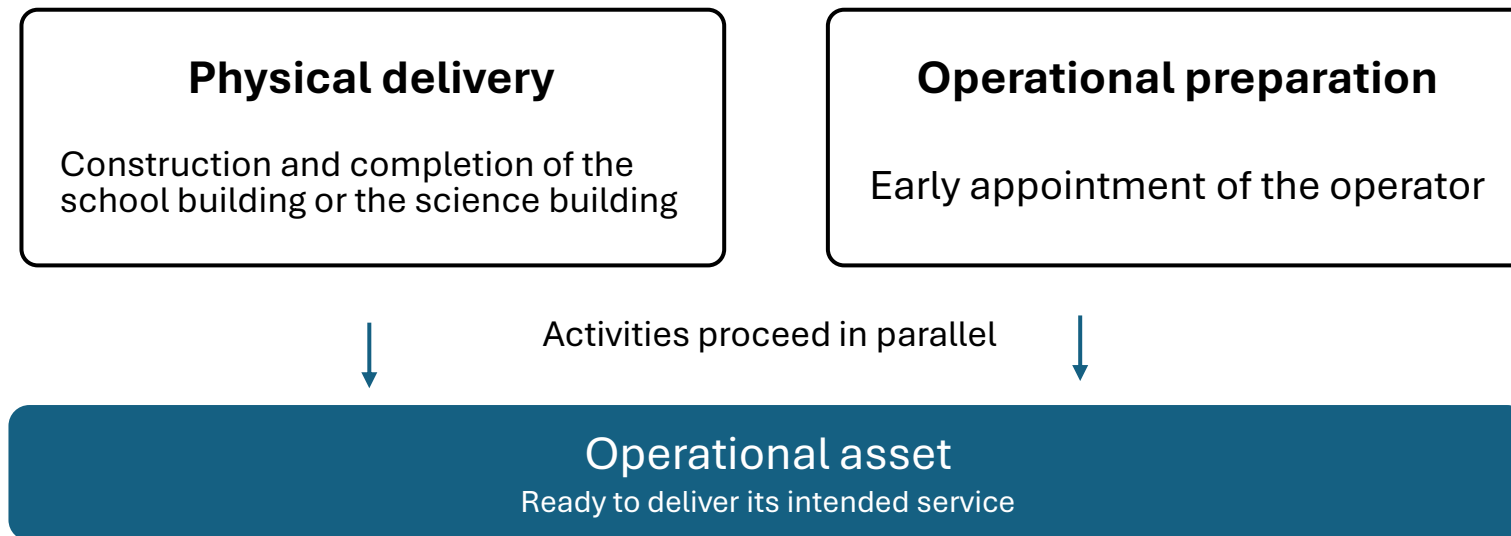


When poor delivery performance carries consequences beyond one contract, firms may have stronger incentives to resolve problems promptly and maintain delivery commitments.

MECHANISM 4

Bring the future operator into governance early

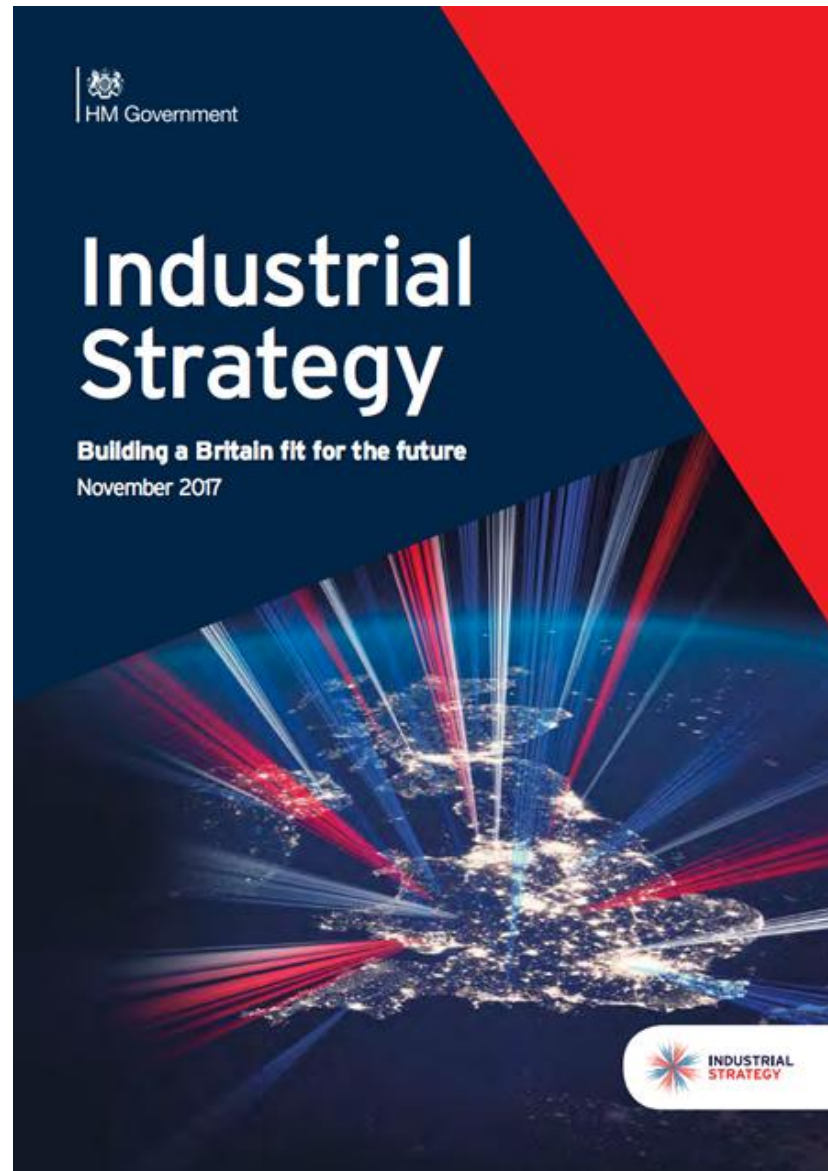
A completed asset is not necessarily an operational asset



Designating and involving the future operator during delivery may allow operational preparation to proceed alongside construction, shortening the interval between physical completion and service commencement.

How governance can shorten the journey from strategy to use

Core Governance Questions	Governance mechanism	Recommendations
What projects will be pursued over time?	1. Sustained strategic direction and visibility of a sequence of projects	Don't recreate the pipeline. Maintain continuity of projects.
Who has the enduring capacity to prepare and advance them?	2. Standing organisations with defined mandates and specialist capacity	Don't recreate the organisation. Maintain continuity of delivery capacity.
What makes delivery organisations accountable for their commitments?	3. Contractor credit and compliance records, potential consequences for future tender eligibility, and controls on subcontracting	Don't isolate accountability to one contract. Connect today's performance to future opportunities.
Who prepares the asset to enter service, and when?	4. Early designation and involvement of the future operator	Don't wait until completion to prepare operations. Bring the operator in early.



Industrial Strategy Grand Challenges #IndustrialStrategy

We will set Grand Challenges to put the United Kingdom at the forefront of the industries of the future.

This fourth revolution is characterised by a fusion of technologies that is blurring the lines between the physical, digital and biological worlds. It will disrupt nearly every sector in every country, creating new opportunities and challenges for people, places and businesses to which we must respond.



AI and Data Economy



Healthy ageing



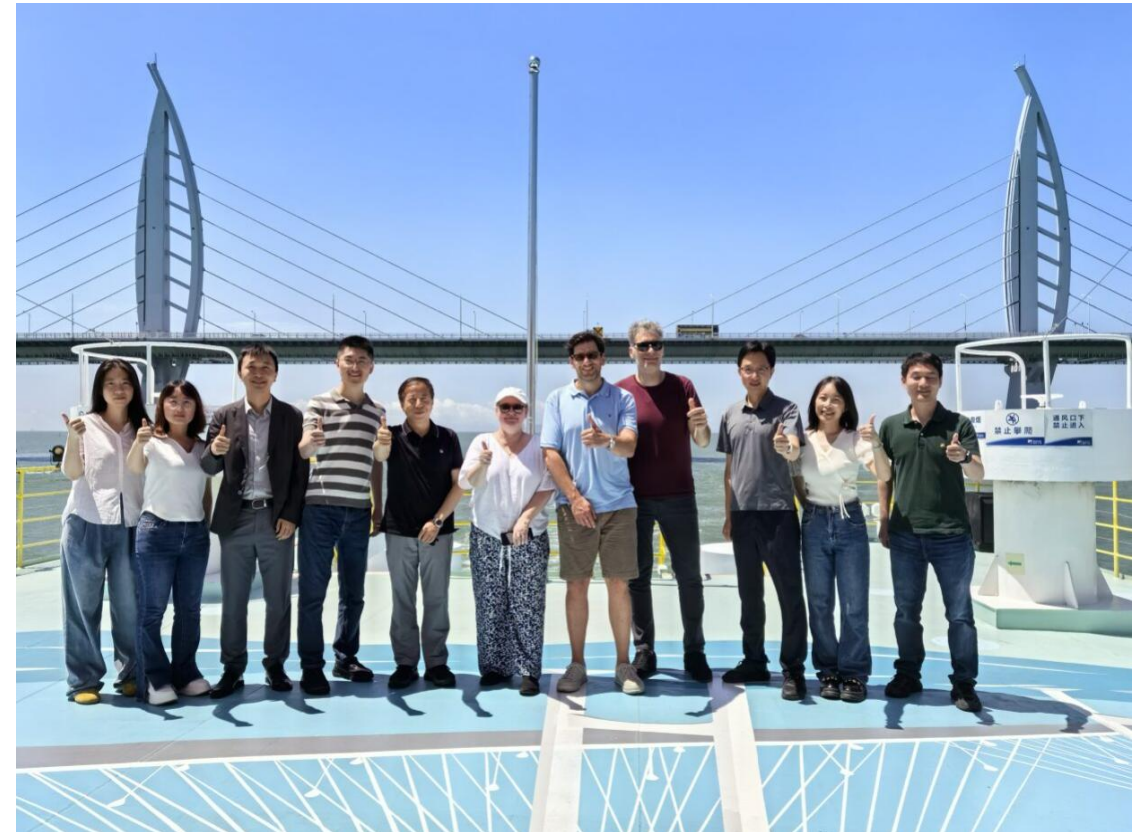
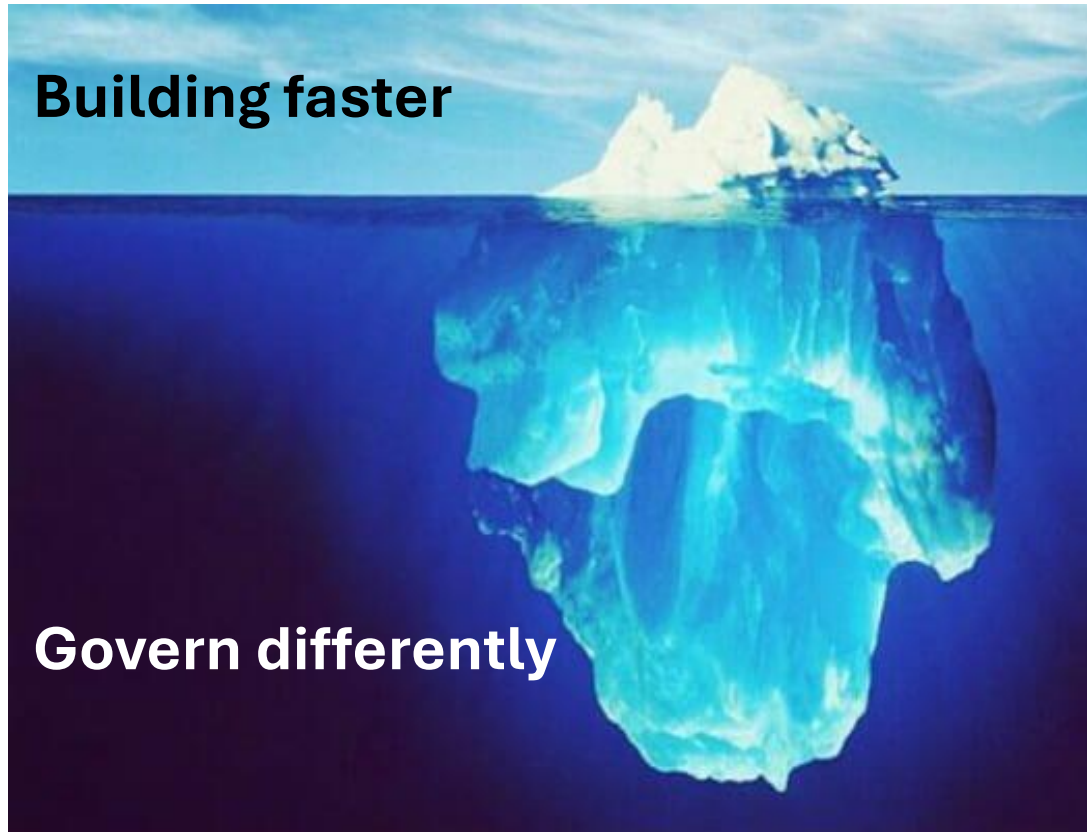
Clean growth



Future of mobility

UK Research and Innovation

Delivered by **Innovate UK** 



Boundary conditions: China's distinctive context is not directly transferable. Research invitation concerned how governance, stakeholder management, leadership and AI affect delivery time. AI tool live translation tools and human translator were used during interview sessions.

Thank you