

# ICE Green Paper: How can infrastructure delivery productivity in Australia be improved?

June 2024

## Executive summary

Stagnant productivity rates are a long-standing issue for infrastructure delivery in Australia, and one which does not appear to be improving anytime soon. In fact, high interest rates, supply chain challenges and labour shortages have exacerbated the issue. Many major projects have not been deliverable, and overruns in terms of budget and project schedules have become common. According to the Australian Constructors Association (ACA), building firms are entering administration at more than twice the rate of other industries.<sup>1</sup>

In the last year, construction productivity and market capacity were made a national cabinet priority, and 50 projects were cut from the Infrastructure Investment Program (IIP) after an independent strategic review found that it contained a large number of projects which lacked sufficient funding or a strong enough business case to justify Australian Government investment.

While the pressures on infrastructure delivery in Australia are particularly acute, Australia is not alone in facing these challenges. The impacts of rising costs and diminishing workforces are felt globally – but can only be overcome through a focus on greater productivity.

Oxford Economics Australia has estimated that raising construction productivity to the economy-wide average will unlock an additional \$56 billion in construction capacity every year – enough to deliver over 1,000 new schools, 10,000 kilometres of road or 25,000 extra hospital beds.<sup>2</sup>

Human prosperity depends on a strong built environment and a strong natural environment. The built environment provides connectivity, clean water, sanitation, reliable energy supplies, flood defences and effective waste management. The natural environment provides a wealth of essential services which are almost too immense and valuable to be quantifiable, but include the production of food, combating chemical and noise pollution, preventing flooding and soil erosion, and contributing to the emotional and sometimes spiritual needs of humanity.

Both the built and natural environments are threatened by the climate crisis, declining biodiversity and the contamination of air, land and water. Improving the productivity with which infrastructure is designed, built and operated is required to meet the needs of society without exhausting the finite resources of our planet.

Given the long-standing nature of Australia's low infrastructure delivery productivity issues, this problem has received a great deal of analysis in recent years from organisations such as Infrastructure Australia, the Australian Constructors Association, Engineers Australia and the Productivity Commission. There is no single route to improving infrastructure productivity. Previous external reports developed on this topic have spoken in depth on issues such as labour and skills

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<sup>1</sup> Australian Constructors Association (2023) [All Risk No Reward](#)

<sup>2</sup> Oxford Economics Australia (2023) [The Opportunity Cost of Long-Term Poor Productivity Performance in the Australian Construction Industry](#)

shortages, the impact of government turnover, digital transformation, and common design and industrialised construction standards.

### Summary of key recommendations for discussion

In this Green Paper, the ICE recommends an additional focus on three areas in particular to raise infrastructure delivery productivity in Australia:

- Establishing a shared and comprehensive understanding of what productivity is in the context of infrastructure delivery, including considering broader social, economic and environmental outcomes.
- Applying a robust project assessment process nationally to ensure that project selection is aligned to clearly articulated long-term infrastructure goals – to achieve an infrastructure pipeline that is stable, sustainable and supports Australia’s vision for the future.
- Introducing standardised collaborative contracts to better mitigate and more fairly distribute project risk, improving the conditions for productivity.

### Summary of key questions for consultation

**We are seeking to hear from policymakers, infrastructure professionals, civil engineers and other interested stakeholders regarding the following key questions:**

1. *Are there more effective outcome measures for the infrastructure delivery sector than labour productivity or Multifactor productivity (MFP)?*
2. *How can social, economic and environmental outcomes be considered alongside economic measures for a more holistic understanding of infrastructure delivery?*
3. *How can infrastructure projects be consistently subject to robust, transparent, independent assessment against long-term infrastructure goals?*
4. *Is Australia’s national vision for infrastructure clearly articulated? Is its vision reflected in its infrastructure pipeline?*
5. *Are government decision-makers adequately held to account for infrastructure project selection? If not, can this reasonably be achieved?*
6. *Do government and industry have the capacity to correctly deliver and administer collaborative contracts? If not, how should this be achieved?*

We invite experts involved in improving infrastructure delivery to respond to the questions below. Responses can be made by emailing [policy@ice.org.uk](mailto:policy@ice.org.uk). The consultation will close on **9 August 2024**.

# Understanding and defining the crisis of infrastructure delivery productivity in Australia

## The status quo

The construction industry is one of the largest centres of value in the Australian economy. According to the Australian Constructors Association (ACA), its businesses directly add around \$150 billion in value to the economy annually, while creating a further \$300 billion in value throughout the construction supply chain. This translates into direct employment for over one million full-time equivalent workers and half as many again in the supply chain.

In the last year, infrastructure delivery has been officially recognised as a critical issue by the national government in Australia:

- In June 2023, construction productivity and market capacity were defined as a national cabinet priority.<sup>3</sup>
- In October 2023, the International Monetary Fund warned that a spending boom on infrastructure projects, mainly at state and territory levels, was pushing Australia's economy beyond capacity and fuelling inflation.<sup>4</sup>
- In November 2023, the Australian Government cut 50 projects from its Infrastructure Investment Program (IIP).<sup>5</sup> The decision followed the findings of an independent strategic review, which found that the ten-year program developed by the former coalition government was undeliverable. It was determined that the cut IIP projects did not have sufficient funding or a strong enough business case to justify their investment.
- In December 2023, the Infrastructure Australia Amendment (Independent Review) Bill 2023 was passed into law, responding to the recommendations of the 2022 Independent Review of Infrastructure Australia (IA) by strengthening its mandate and revising its governance structure.

The IIP strategic review highlighted many issues with how infrastructure projects are approached in Australia, noting that many IIP projects:

- did not demonstrate merit
- lacked any national strategic rationale
- did not meet the government's national investment priorities
- were often at high risk of further cost pressures or delays.

The review concluded that several projects received funding commitments too early in their planning process, before detailed and credible design and costing were undertaken. It noted the absence of any requirement or mechanisms to fund projects based on alignment with long-term national priorities.

The review also found that the government addressed cost pressures, cost escalations, delivery delays and changes to project scope on an ad hoc basis. This ad hoc approach made the government slow to respond to evidence of looming cost increases and was emblematic of a broader lack of transparency and consistency in addressing problems.

Finally, the review noted that the IIP was intended to fund projects that contribute to national productivity and growth; however, many small-scale and local projects were urgently funded under the IIP as job stimulus measures in response to the COVID-19 pandemic. This use of infrastructure projects as economic stimulus contributes to cost escalations and is counter to improving productivity rates.

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<sup>3</sup> Australia's Federal Relations Architecture (2023) [National Cabinet Priorities](#)

<sup>4</sup> International Monetary Fund (2023) [Australia: Staff Concluding Statement of the 2023 Article IV Mission](#)

<sup>5</sup> ICE (2023) [Australian Government Cuts 50 Projects in Major Infrastructure Review](#)

More broadly, as highlighted by KPMG's Global Construction Survey 2023, the Australian construction sector feels that a lack of productivity gains and risk management pressures are two of the biggest challenges it faces:<sup>6</sup>

- 87% of respondents said project performance is a continuing issue.
- Only 50% of project owners are meeting completion deadlines.
- 37% of respondents said they have missed budget and/or scheduled performance targets due to a lack of effective risk management.

### Defining productivity

One of the primary challenges when discussing and quantifying the productivity of infrastructure delivery in Australia is the lack of consensus on the definition.

At a high level, productivity refers to the rate at which goods and services are produced (output) per unit of labour, capital, raw materials, etc. (input). Thus, the traditional view of productivity can be understood as a ratio of the quantity of output against the quantity of input used.

$$\frac{\text{Input}}{\text{Output}} = \text{Productivity}$$

### Understanding productivity through economic measures

Most reports reference research by the Productivity Commission, which typically refers to either labour productivity or Multifactor productivity (MFP). Labour productivity is the ratio of output to hours worked, whereas MFP refers to the ratio of output to the combined input of labour and capital and is therefore a more fulsome measure.

The Commission's latest five-year review, published in 2023, declared that Australia is experiencing its worst labour productivity growth in 60 years. Over the decade to 2020, average annual labour productivity growth in Australia was the slowest in 60 years, falling to 1.1% compared with 1.8% over the 60 years to 2019–20.<sup>7</sup> Productivity growth describes when there's a reduction in the input (labour) required to produce a given level of output.

The ACA says that the size of the construction industry means a turnaround in national productivity will not be possible without moving the needle on construction productivity, describing Australia's construction industry as having one of the worst productivity records in the economy using MFP:<sup>8</sup>

- Construction industry MFP has declined by 16.5% since the peak of the resources boom in 2014 – a more significant drop than that felt by other industries.
- Construction industry wages have risen more than 85% since 2001–02, while MFP fell 8% over the same period.
- Overall, MFP in the construction industry was 1.8% lower in FY 2021 than in FY 1990 – an average growth rate of -0.1% per annum since FY 1990, which is well below transport (0.9% pa) and manufacturing (0.8% pa).

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<sup>6</sup> KPMG (2023) [Global Construction Survey 2023](#)

<sup>7</sup> Australian Government/Productivity Commission (2023) [5-Year Productivity Inquiry: Advancing Prosperity](#)

<sup>8</sup> Australian Constructors Association (2022) [Disrupt or Die – Transforming Australia's Construction Industry](#); Australian Constructors Association (2023) [Nailing Construction Productivity – A Blueprint for Reform](#)

- In FY 2019, the opportunity cost – that is, the potential foregone construction output from a 30-year period of relatively weak productivity performance – was roughly \$35 billion. Two years later, the opportunity cost had risen to \$47 billion.
- At a state level, the opportunity cost from weaker construction industry productivity ranges from \$493 million for the Northern Territory to \$15.4 billion for New South Wales for FY 2021 alone.

### Understanding productivity using alternative measures

The challenge with using either labour productivity or MFP to communicate the current state of infrastructure delivery is that they are incomplete measures and do not capture any improvements in the quality of outputs or an expansion in the range of outputs. In the past 60 years, infrastructure delivery has changed significantly across a range of qualities, including sustainability, work health and safety (WHS), and increased community engagement. This means that focusing on increasing these ratios without a holistic look at our expectations for the sector misses many of the outcomes we want projects to achieve.

The ICE has considered improving infrastructure delivery productivity through the lens of processes:

- A more effective process produces outputs of a greater quality or at a greater scale. Effectiveness means selecting the right projects, making the right design choices and choosing the right delivery models.
- A more efficient process is one which has a greater ratio of outputs to inputs. Efficiency involves a considered approach to the consumption of materials, effort, talent, data, energy, carbon emissions, land and ecosystems. This will also reduce costs and provide better value for money.

Thus, improving productivity means increasing both effectiveness and efficiency. The focus on efficiency here includes the increased outputs which the economic productivity measures encompass but alongside an additional focus on effectiveness. Effectiveness here can include driving positive social impact, carbon and climate outcomes, etc., and also includes a greater range of inputs than solely labour hours or labour and capital. These inputs will vary by project but may include:

- Human capital, considering not just hours worked but also the knowledge, skills, competencies and attributes embodied in individuals working in design, construction, maintenance and operation.
- Materials, considering processed or unprocessed materials, items, components and fittings used in design, construction, maintenance and operation.
- Machinery, such as tools (including digital tools), equipment, machinery and plant used in design, construction, maintenance and operation.
- Time taken to complete the project (or process). This can be considered a proxy for financing (opportunity costs of capital) and delays to utilising the outputs or realising the outcomes.
- Energy consumption embodied in all the materials used, as well as during construction, maintenance and operation.
- Social capital, or the willingness and time invested by stakeholders, including the local community, to participate in and support the project.
- Land and ecosystem, considering what is required for design, construction, maintenance and operation, as well as how the ecosystem can be damaged, preserved or enhanced as a result of changing land use.
- Information and data, including both the raw facts and the organised, structured and interpreted facts (information) used in design, construction, maintenance and operation.

Outputs are more challenging to define. This could be considered in terms of assets created: how many bridges, tunnels, sports stadiums or metres of stormwater pipes are produced.

However, infrastructure is not created solely for infrastructure's sake, but rather to serve the needs of the community. Infrastructure investment should be driven by delivering better social, economic and environmental outcomes.

A more holistic approach, suggested by the ICE-convened Enabling Better Infrastructure (EBI) program<sup>9</sup>, might focus on improving social outcomes rather than project output. Sustainability measures, such as the UN Sustainable Development Goals (SDGs), provide a baseline for ensuring projects achieve objectives against a wide range of social and environmental outcomes, addressing the real-world problems of people and nature. This also assists with forming an explicit rationale for infrastructure projects and interventions.

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<sup>9</sup> ICE (2024) [Enabling Better Infrastructure](#)

## Assessments and pipelines

### Achieving pipeline stability

The ICE has heard from infrastructure experts that in order for Australia to achieve its long-term infrastructure goals, it needs a sustainable, funded infrastructure pipeline. However, this can only come from a sustained set of infrastructure plans. A single, dependable, predictable pipeline of projects supports both government and industry to understand future demand and plan with certainty.

A major cause of pipeline instability is from the ongoing cycle of infrastructure projects being announced, and then cancelled due to scarce funding and a lack of market capacity for delivery. This is a not a sustainable model for infrastructure delivery.

Proposed infrastructure projects must be subject to robust, transparent, independent assessment against long-term infrastructure goals to ensure they are worthwhile. The biggest gains and losses of productivity arise from fundamental decisions made well before ground is broken.

Assessments must be provided to the public and government officials before final project selection; in recent years, many infrastructure projects involving substantial public funds were committed to by governments before Infrastructure Australia (IA) had completed an assessment.<sup>10</sup> This led to projects being selected which were inadequate to meet desired outcomes or offered poor value for money – whether due to insufficient due diligence, overemphasis on low upfront costs, or politically motivated decision-making.

A balanced and objective view is necessary, as avoiding higher upfront costs is often a false economy; capital costs generally only account for 1% to 20% of the total spend over an infrastructure asset's life.<sup>11</sup> Through taking a long-term, holistic view of infrastructure needs, unintended trade-offs such as higher operational and maintenance costs, poor reliability or safety, and reduced infrastructure lifespan, can be mitigated.

Furthermore, the instability of infrastructure planning creates a disincentive for private investors, who are motivated to look overseas for more stable investment opportunities. For Australia to be an attractive and competitive market for investment, certainty and transparency are vital.

### National vision

Infrastructure projects should be selected according to their ability to deliver on Australia's national vision, including its desired economic, social and environmental outcomes. The ICE-convened EBI program recommends a clear vision to help streamline buy-in from the whole of government and the country, in order to plan for the wider system of infrastructure and to support a systematic approach to infrastructure decision-making. Without a clear national vision, there is a risk that national infrastructure plans become a collection of unrelated projects, all pursuing different goals and making little systemic impact.

The EBI program also speaks to the need to account for all environmental, social and governance concerns as part of assessing potential projects to ensure impacts are identified upfront, noting that not all the benefits of infrastructure can be easily measured in financial or numerical terms.

A clearer articulation of the desired outcomes for infrastructure delivery at the planning stage may also support more low- and no-build solutions, i.e. approaches that involve minimal or no physical construction of new assets. Low- and no-build projects are less resource-intensive than traditional infrastructure projects and, therefore, generally have a lower environmental impact and are often more cost-effective. Examples include traffic management and optimisation programs to improve traffic flow, and investment in energy efficiency. However, less conspicuous projects can suffer from a lack of political saleability, even when their predicted outcomes are higher than more visible projects.

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<sup>10</sup> Australian Government/Productivity Commission (2023) [5-Year Productivity Inquiry: Innovation for the 98%](#)

<sup>11</sup> Wu, S and Clements-Croome, D (2007) [Ratio of Operating and Maintenance Costs to Initial Costs of Building Services Systems](#)

A cultural shift is needed so infrastructure delivery is seen as an interconnected system, rather than as hundreds of individual, siloed projects and contracts. An infrastructure pipeline of work must be actively managed to optimise a portfolio of projects that draw on the same workforce, organisations and resources.

By maturing the current project-to-project or contract-to-contract approach through better sequencing of works, market confidence is strengthened while cost volatility and overall prices are reduced. Furthermore, as projects move from being regarded individually to being considered together as a 'system', successful innovations can be redeployed and successes are shared to increase productivity.

Transparency, reliability and accountability also foster an environment of innovation, as certainty in the supply chain helps to establish a more financially sustainable, healthier ecosystem. Profitable, mutually beneficial transactions enable innovation and trust, as suppliers have the confidence to invest in research and development, owners and delivery agencies benefit from improvements in productivity, and the community ultimately benefits from the delivery of desired outcomes.

### Current approaches

At present, the industry-led Australia and New Zealand Infrastructure Pipeline (ANZIP) tracks projects from their early stages of planning, through to contract award, and into their operational phase, across both countries using publicly available information and over a five-year horizon.

This is supplemented by IA's Infrastructure Priority List (IPL), though this is limited to nationally significant projects and initiatives in the planning (pre-funding and pre-delivery) stages, and therefore only provides insights into a limited segment of unfunded work.

An example of how a pipeline can operate is seen in the United Kingdom, where the Infrastructure and Projects Authority is charged with publishing National Infrastructure and Construction Pipeline reports<sup>12</sup> to improve market visibility of demand and increase market confidence. These set out planned and projected investment in major economic and social infrastructure over a ten-year horizon, as well as the workforce requirement to deliver it and a list of near-term planned procurements.

### Recent developments

Change is coming to how Australia plans its infrastructure investments. As part of the 2023 Independent Strategic Review of the Infrastructure Investment Program, the states and territories agreed to, in consultation with local governments, develop an annual infrastructure plan, including priority projects that have or are seeking a federal funding contribution over the next ten years and how they will be sequenced. The plan will include how the jurisdiction will manage cost pressures, and other related impacts – for example, population growth, carbon emissions, regional development or housing.

From this, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts will prepare national infrastructure advice for the Australian Government annually. The advice will include analysis of the existing infrastructure investment pipeline, future challenges, and the sequencing and prioritisation of projects. This advice will inform Australian Government decisions on managing cost pressures for existing projects and new projects to be funded.

Through the Infrastructure Australia Amendment (Independent Review) Act 2023, the Australian Government has also reinforced IA's mandate in response to the 2022 Independent Review of Infrastructure Australia. The Act, which was passed in late 2023, establishes a stronger governance structure, comprising three expert commissioners to be supported by an expert advisory council. It also further refines the IPL to include only projects that are aligned to the government's policy objectives, and within IA's remit of transport, water, energy and communications infrastructure. Further recommendations from the review are expected to be implemented through a revised Statement of Expectations later this year.

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<sup>12</sup> Infrastructure and Projects Authority (2024) [National Infrastructure and Construction Pipeline 2023](#)



- 3. *How can infrastructure projects be consistently subject to robust, transparent, independent assessment against long-term infrastructure goals?***
- 4. *Is Australia's national vision for infrastructure clearly articulated? Is its vision reflected in its infrastructure pipeline?***
- 5. *Are government decision-makers adequately held to account for infrastructure project selection? If not, can this reasonably be achieved?***



## Introducing standardised collaborative contracts

### The impact of poor risk allocation

An essential part of unlocking greater infrastructure delivery productivity in Australia is increasing the government's appetite for risk through the use of collaborative contracting.

For three years consecutively, Infrastructure Market Capacity industry survey respondents have ranked risk identification and allocation as the greatest threats to market capacity.<sup>13</sup> The 2021 National Study of Infrastructure Risk highlighted several market trends regarding risk, including:<sup>14</sup>

- declining contractor profitability
- increasing insurance premiums due to climate risk
- increased construction material costs
- heightened cybersecurity risks
- labour shortages
- project delays and increased costs due to social licence issues.

The same report also noted that 68% of respondents to the Infrastructure Australia 2021 Market Sounding Survey indicated that traditional contracting methods did not adequately manage for emerging risks.

Projects risks should be allocated during contract negotiation to whoever is best placed to manage them, as per a project's complexity and size. For straightforward projects where a supplier can reasonably be expected to handle project risk, clients can opt for a fixed-price contract, ensuring cost certainty. This contract type is structured to start from the assumption of failure and offload risk and costs on to suppliers. Generally speaking, additional project complexity creates more risks, while greater project size increases the financial impact of a risk being realised.

In construction, very few construction projects would fit the above profile of a straightforward project and a fixed-price contract would likely only be suitable for some subcontracted work. For the complex or larger projects which make up the vast majority of infrastructure delivery, it is more feasible for client and supplier to agree to pool risk, thereby sharing both any project savings or overspends.

This is a primary feature of collaborative contracts, which are structured around a relationship of mutual trust and cooperation between contracted parties, rather than an adversarial one. Collaborative contracts are also written in plain English with a straightforward and easily understood structure and become part of the living documentation of a project. When project changes are required or requested, or there are project setbacks, the contract supports the contracted parties to work collaboratively and efficiently to ensure minimum disruption and impact on the overall cost. This is in contrast to traditional negotiations in response to realised risk, or to a possible dispute at the end of the contract, both of which are potentially expensive and time-consuming endeavours.

A fair and sustainable risk allocation aligns the interests of clients and suppliers, fostering a co-operative environment across multiple contracts that cover the relationships with different suppliers servicing various project aspects, from design to operations.

### Government use of bespoke contracting

In Australia, the national and state governments often use contracts for infrastructure projects which are labelled as 'standard' but are actually bespoke. Contract uniqueness creates an additional burden of work which deters potential

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<sup>13</sup> Infrastructure Australia (2023) [Infrastructure Market Capacity 2023 Report](#)

<sup>14</sup> Infrastructure Australia (2021) [A National Study of Infrastructure Risk](#)

bidders. It can also lead to interpretation issues and ensuing contract management failures. These contract uniqueness issues can be further compounded by low visibility of contracts before tender, and unreasonably short timeframes for tender responses.

Effective risk allocation should be fair and sustainable throughout the life cycle of the project. Risk allocation and management are at the core of the legal and commercial relationship established by a project's contract. Standardised collaborative contracts written in plain English would reduce delays and expenses from contract disputes, as well as support more efficient procurement processes.

At present, due to their dominant position in the sector, government clients can unfairly (and unsustainably) offload risk onto suppliers through bespoke contracts. Any security or protection this appears to give the client is illusory. In even the best-case scenario, this practice:

- increases prices
- encourages adversarial relationships between clients and contractors, further delaying project completion as unexpected setbacks trigger additional negotiations over responsibilities and compensation
- stifles innovation, as contractors stick to what they know works.

Critically, unreasonable risk allocation can also give the false perception to government that risk is being managed effectively when it is in fact beyond the supplier's ability; in an industry with slim margins, contractors and subcontractors often lack the financial strength to take on a majority share of project risk. This also encourages contractors to push risk allocation onto subcontractors, whether or not the subcontractor can reasonably bare the risk. Thus, poor risk allocation contributes to runaway project costs, time over-runs, strained relationships and project failure.

Bespoke, adversarial contracts may also seem more certain due to the wealth of existing case law to inform any litigation between relevant parties; however, collaborative contracts have been in use for decades, yet have a shortage of case law precedent as the collaborative nature decreases the likelihood of litigation. In practice, bespoke contracts, once signed, are generally disregarded until litigation is introduced. Collaborative contracts, when implemented correctly, remain living documents in active use for the duration of the contract.

Because collaborative contracts are designed to be in use for the duration of the project, there is a requirement for the contract owner to play an active role in administering the contract until project closure; this is not a contract type that can be signed and then placed in the drawer until litigation. As highlighted by the IIP strategic review, the government is guilty of addressing cost pressures, cost escalations, delivery delays and changes to project scope on an ad hoc basis. Both government and contractors will need to change how they approach project delivery in order to manifest the positive impacts of collaborative contracting.

As the representative of the broader community, government is concerned with how infrastructure will impact those who will use, pay for and live alongside public infrastructure. This means that government has a role to play as a 'model client', raising the standard of practice for the broader sector. The current focus on delivering infrastructure at the lowest cost must evolve into a more mature, less risk-averse approach which considers value for money alongside public value.

**6. Do government and industry have the capacity to effectively deliver and administer collaborative contracts? If not, how should this be achieved?**

## Consultation questions

This consultation runs until **9 August 2024**. Responses may be submitted by emailing [policy@ice.org.uk](mailto:policy@ice.org.uk).

When responding, please include your name and whether you are responding individually or on behalf of an organisation or group. Please provide evidence or case studies to support your response. All responses will be treated confidentially, and respondents will not be published.

### Understanding and defining the crisis of infrastructure delivery productivity in Australia

**Question 1:** Are there more effective outcome measures for the infrastructure delivery sector than labour productivity or Multifactor productivity (MFP)?

**Question 2:** How can social, economic and environmental outcomes be considered alongside economic measures for a more holistic understanding of infrastructure delivery?

### Assessment and pipelines

**Question 3:** How can infrastructure projects be consistently subject to robust, transparent, independent assessment against long-term infrastructure goals?

**Question 4:** Is Australia's national vision for infrastructure clearly articulated? Is its vision reflected in its infrastructure pipeline?

**Question 5:** Are government decision-makers adequately held to account for infrastructure project selection? If not, can this reasonably be achieved?

### Introducing standardised collaborative contracts

**Question 6:** Do government and industry have the capacity to correctly deliver and administer collaborative contracts? If not, how should this be achieved?

## About the ICE

The Institution of Civil Engineers (ICE) is a 97,000-strong global membership organisation with over 200 years of history.

The ICE has over 2,300 members based in Australia.

It is a centre of engineering excellence, qualifying engineers and helping them maintain lifelong competence, assuring society that the infrastructure they create is safe, dependable and well designed.

Its network of experts offers trusted, impartial advice to politicians and decision-makers on how to build and adapt infrastructure to create a more sustainable world.

For more information, please contact [policy@ice.org.uk](mailto:policy@ice.org.uk)