

A fork in the road

The why, what and how of a new path that
Australia's infrastructure leaders must in the national interest



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The challenge

A string of failures in Australian construction companies is one sign of more systemic problems in Australia's approach to infrastructure provision. Previous attempts to resolve these problems have been largely ineffective. The nation's prosperity and security will be severely undermined if actions aren't taken to resolve persistent issues that impede productivity, innovation and public value creation. More reports and talkfests won't deliver a materially better outcome. It's time for a better approach.

The solution

The solution does not lie in new technologies, going 'digital' or more investment. It will come through new and better choices made by more capable and ambitious leaders. It is possible to build and exercise this muscle for insightful, strategic and collaborative leadership of infrastructure provision. The real question is whether leaders are prepared to get outside their comfort zone in the national interest.

The benefits

The benefits are difficult to overstate. Resolving the problems with Australia's infrastructure provision will eliminate costs and deliver benefits accruing to billions of dollars every year. It will also deliver more resilient assets in the face of escalating risks including but not limited to climate change. Other sectors facing similar systemic issues will also be able to learn from the transferable lessons and capabilities required to deliver these benefits.

*“Systems are perfectly designed
to achieve the results they are
delivering right now.”*

David Peter Stroh,
author of ‘Systems Thinking for Social Change’

A fork in the road

Recent reporting on the collapse of building companies has highlighted problems in Australia's construction sector. The string of failures in construction firms severely undermines the nation's building capacity. But failures aren't limited to the construction sector. Australia's system of infrastructure provision is failing in multiple ways and its leaders are on notice. The situation will worsen until critical interventions occur. The why, what and how of those interventions is the focus of this paper.

Symptoms on display

On 22 February 2022, the construction company Probuild was put into administration. Its South African parent company had propped it up for months, but escalating liabilities made ongoing support untenable¹.

Probuild's demise is symptomatic of a construction industry under extreme pressure. Owners and investors expect head contractors to carry big risks on complex projects for little financial reward. The risk is passed on to subcontractors and engineering firms with diminishing appetite and ability to carry those risks². Connected is insurers' growing unwillingness to cover professional indemnity risks. Deeply dissatisfied professionals are leaving an "inflexible, confrontational and aggressive" sector³.

Systemic problems

As Consult Australia's CEO, Nicola Grayson⁴, stated recently, "The system is broken". The problems are not limited just to construction firms. Systemic issues exist throughout Australia's system of infrastructure provision, costing taxpayers and the nation many billions of dollars every year^{3,5}. They include poor project planning, weak or absent business cases, and poor front-end design practices.

Politicians also ignore the very institutions they establish to address these persistent problems. So, billions are spent on projects that are unnecessarily risky and deliver poor public value.

Much of our public infrastructure isn't 'smart' and lacks resilience. And infrastructure networks are far more fragile and vulnerable to cascading failures than most owners and operators wish to acknowledge.

While governments are the biggest buyers of infrastructure, they don't carry sole responsibility for these problems. Despite commercial and regulatory drivers for change, productivity and innovation improvements by private sector participants remain low relative to needs⁶.

Efforts to fix these problems look more like tweaking when transformation is required. Leaders must stop fiddling at the margins of our fraying infrastructure system.

Eroding much-needed trust

This situation feeds into the persistent state of distrust of government. Citizens feel that governments are unable or unwilling to solve these and other problems⁷. We see it in the communities devastated by floods on our eastern seaboard. People are angry, asking why infrastructure was inadequate, emergency preparedness remains poor, and the federal government persists with rhetoric and deception over action on climate change⁸.

As our nation faces growing challenges requiring trust and cohesion to resolve, these failures have more than isolated and short-term consequences.



Locals look across the new \$101 million Windsor Bridge in Sydney's west, submerged during the devastating floods in March 2022. Government officials had told locals it would be 'flood proof'. (Source: AAP)

Action is needed now

This is not a problem we can continue to kick down the road. Cheap capital won't exist forever, and threats from climate change, geopolitical tensions and fractured supply chains are escalating. As a greater proportion of federal funds are diverted into Defence, and governments work to pay down debt, every public dollar must be spent well. Only immediate, thoughtful and coordinated action, with coherent policy measures, will enable an orderly transition.

So, leaning into this task, we must ask why Australia's system of infrastructure provision remains poor. What are the real root causes of the problem that allows this situation to persist?

The confronting truth

The objective truth is that our infrastructure system is producing what its masters want it to. What we are getting is the net result of the individual interests of the people in control.

This 'net interest' outcome does not equate with the national interest. Australia's system of infrastructure provision is not delivering good public or private value. It is a fact that will become increasingly obvious.

Transformation, not tweaking

Take, for example, one outcome we require as a nation: decarbonisation of our energy system by 2035. The pace and scale of transition required is unparalleled in our nation's history. *Business-as-usual methods of infrastructure provision can't deliver this outcome at pace and scale*⁹. Similar challenges exist in transport, water and communications sectors... which are increasingly interconnected. So, a transformation, not tweaking, of our system for infrastructure provision must occur.

Right along infrastructure value chains, business models must evolve to *collectively* achieve more with less. Governments must also deliver regulatory reforms to smooth the passage of more digitalised and integrated infrastructure networks.

And designers need to create assets that people want in their backyards and can afford.

A smarter, collaborative workforce

Achieving the transformation involves unparalleled levels of collaboration. Competition and ‘the market’ can’t enable a coherent transition with the pace, scale and efficiency required. Yet, collaboration is so often espoused but rarely practiced. For this to occur, we need a different level and character of leadership.

Developing the leaders in infrastructure that Australia requires involves upskilling – from the shop floor to the top floor. This will continue to stretch a workforce already under strain^{3,10}. But it is possible to achieve and can quickly unleash enormous latent potential within our private and public sectors. This is because the greatest impediment to progress is not technology and regulation but mindsets and methodologies which can be learnt, applied, and scaled up quickly *if the will exists*.

Public systems under strain

To be clear, Australia’s infrastructure system is not the only system under strain and ill-suited to our emerging operating environment.

Australia’s health system was under increasing pressure from an ageing population even before the impact of the pandemic. Our education system is failing to prepare many of our youth for the future of work and needs of our economy. And fractured and overloaded welfare systems are failing many of our most vulnerable families and children. They are consequences of failure in public policy formulation and implementation.

This is not, however, a criticism of the many public and private sector leaders that work hard with good intent every day. It is simply that many leaders are ‘in over their heads’¹¹. This is not an opinion. It’s a brutal and demonstrable fact. The complexity of the challenges they face exceed their current ability or licence to deal with them.

What needs to change?

We must all stop ‘muddling through’. Leaders throughout the infrastructure value chain need to step out of their consuming busyness and critically assess the root causes of persistent and crippling

problems in Australia’s infrastructure system – accepting that, to date, this has not been done effectively. Assumptions that no longer serve us well must be named and transcended; for example, that “only government can solve the problem”.

Doing more of the same – more reports, talkfests, indices and rating schemes – will not deliver a materially different result.

Critical interventions

There are six (6) critical interventions that public and private sector leaders should contemplate and adopt immediately:

Pause, step back and think together. In particular, ask, “What permits the failure of our system of infrastructure provision to persist?” Only an honest and insightful answer to this question will ensure effort and investment is well placed.

Build skills to lead systems well. Some governments are beginning to build skills in systems thinking and leadership (through programs such as those led by ANZSOG¹²). These skills are crucial to understanding ‘the problem’ and then enabling genuine progress in complex, networked and adaptive systems (i.e., our systems of infrastructure, education, health, welfare, justice, finance and democracy). Private sector leaders need these skills too. Without them, businesses will fail to understand, position for and benefit from the emerging needs and opportunities.

Focus on outcomes. We must all stop ‘muddling through’, taking incremental, unguided steps forward. The gap between the ‘as is’ and desired ‘to be’ state of our infrastructure system must be defined more usefully and insightfully. A more articulate description of our shared end goals is essential to delivering the outcomes we require and triggering the innovation and investment that will get us there.

Employ outcome-driven ‘intentional design’.

Owners and investors should specify outcomes and buy solutions rather than specifying tasks and buying outputs. Investing in ‘intentional design’ to deliver desired outcomes will de-risk projects and unleash latent potential in the infrastructure



The rate at which renewable energy must be developed and integrated to displace fossil fuels in Australia represents arguably the biggest engineering and infrastructure challenge in Australia's history.

players to conceive and deliver much more affordable and valuable infrastructure¹².

Start small together. Like-minded leaders along the infrastructure value chain should partner in taking small early steps in the process of transformation and building new business models for infrastructure delivery. Doing so makes them achievable, while sharing and leveraging the intellect, investment, risk and learning prior to scaling up. This will help to overcome the fear impeding change and accelerate progress. (Organisations like the Infrastructure CoLab¹⁴ are making this possible.)

Measure progress toward outcomes.

Accountability for effort, learning and progress should be demonstrated across the public and private sectors. Rarely is it clear if new infrastructure delivers expected results and enhances the performance and resilience of infrastructure networks¹⁵. Learning and improvement cannot occur without such a commitment to monitoring, evaluation and improvement.

To be frank, these interventions are not especially novel. But they are uncommon. In itself, this is an important insight to the state of Australia's system of infrastructure provision and its leadership.

Conclusion

Business failures in the construction sector are signals of wider problems in Australia's system for providing infrastructure. The cost to national prosperity and security is substantial and rising unacceptably. Persistent problems in the infrastructure system reveal that previous efforts at 'solutions' have been ineffective and arguably 'solving the wrong problem'. More of the same won't deliver the outcomes we desperately need.

The solution does not lie in new technologies, going 'digital' or more money. It will come through new and better choices made by more insightful, capable and ambitious leaders.

It is possible to build and exercise our collective muscle to deliver more valuable and resilient infrastructure for Australians. The question is whether leaders in infrastructure sectors can step outside their comfort zones to do what is needed in the national interest.

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About the author

Dr Nick Fleming is the founding director of Innergise – a firm focused on fuelling progress, performance and prosperity by helping people to conceive, design and execute smarter strategies, programs and projects. For 30 years Nick has worked with the private sector and all levels of government across infrastructure, mining, natural resources, water, defence and social welfare sectors throughout Australia, New Zealand, south-east Asia, the UK and Americas, receiving multiple awards for his work.

Prior to founding Innergise, Nick held roles including Director of Business Innovation for Jacobs Group (Australia), and Chief Sustainability Officer and global manager for technology and innovation for SKM. He was taskforce chair for Infrastructure Partnerships Australia (IPA) and a Board director with the Infrastructure Sustainability Council of Australia (ISCA). He is currently the National President and Chair of the Board of Engineers Australia, a non-executive director of South Gippsland Water and Advisory Board member with the Infrastructure CoLab.

Nick is an active author, speaker and educator. He delivers unique, executive-level programs on complex problem solving, systems thinking and effective policy implementation as a faculty member of the ANZ School of Government to clients including the Department of Prime Minister and Cabinet and the National Transport Commission.

My notes

“Leading systems is about enabling people to collaborate and deliver enduring benefits in an efficient and effective way through carefully targeted interventions and deliberate learning.”

Nick Fleming on leading systems for ANZSOG, 2022

Innergise is a firm focused on fuelling progress and prosperity by helping people to conceive, design and deliver better programs and projects.

We remove the impediments to superior productivity by unleashing and focusing the talents of your people, achieving your current goals and setting you up for enduring success. Monotony becomes momentum. Risks become results.

Innergise provides proven skills in strategic thinking, complex problem solving, innovation and facilitation.

We apply hands-on experience in executive leadership and change management, with insights drawn from our work across industry sectors and regions of the world, to generate a sharper focus and more realistic, integrated solutions that stick.

It's all about better placed effort – not more effort – to deliver immediate and lasting results.

