



Cumulative Impacts

evidence to support place-based approaches



Institute for Infrastructure in Society: Research Briefing



An unprecedented ‘Big Build’

Australian communities are experiencing an unprecedented scale and pace of project delivery. Australian governments are currently planning and delivering a \$300B infrastructure pipeline. In the next five years alone, some 434 projects will be delivered, valued at \$218B (Infrastructure Australia, 2021).

As the extent and intensity of Australia’s Big Build picks up, so too do cumulative impacts on communities across Australia – particularly on the East Coast which accounts for 87% of the major public infrastructure pipeline over the next five years.

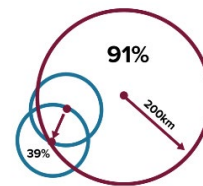
More projects, closer together

Experts interviewed by the ANU Institute for Infrastructure in Society (I2S) agreed that the increasing scale, complexity, and intensity of projects is placing added pressure on market participants and communities. As one respondent put it, “...In the late 80s, you might have had a project that could be delivered in 15 years over 10 projects, now [it’s] one project over five years” (I2S Social Risk & Australian Infrastructure Report, 2021 – link below).

This rise in ‘mega projects’ - that is, projects over \$1B in capital cost - is notable. Communities are seeing bigger, more complex projects delivered more closely together than ever before.

91% of all megaprojects will have at least one more within 200km

39% of all megaprojects will have at least one more within 5km



Co-location of mega projects. Source: Infrastructure Market Capacity, Infrastructure Australia, 2021.

What are cumulative impacts?

Cumulative impacts are the result of incremental, sustained and combined effects of multiple projects in an area, and the accumulation of effects from past, current and future activities as they arise.

Impacts including, dust; noise; changes to the amount of greenspace; changes to community identity; disruptions or changes to traffic and parking; changes to demographic make-up; changes in access to services, amenities or culturally significant sites; and changes in geographic connectivity are some common examples of cumulative impacts arising from infrastructure development. In order to identify and understand cumulative impacts, it is best to consider them from the perspective of a person living or working in that place, known as **a place based approach**.



AUSTRALIAN PERSPECTIVES ON INFRASTRUCTURE REPORT

- Drivers of trust in infrastructure
- Insights on cumulative impacts



SOCIAL RISK & AUSTRALIAN INFRASTRUCTURE REPORT

- Defines social risk for major projects
- Links social risk to corporate social performance
- Explains connections between social licence to operate & social risk management
- Social Risk Scanner



STATE OF INFRASTRUCTURE & ENGAGEMENT REPORT

- Major influences on project delays
- Impacts of societal and community pressure
- Social risk impacts and management
- Deep dives: Shift to digital engagement, pandemic impacts, community resilience, cumulative impacts management

Key Insights

Cumulative impacts affect how community members think and feel about infrastructure

Australian community members who are experiencing four to six, or six or more projects in their local area report:

- lower levels of trust in infrastructure proponents and governments
- lower levels of project acceptance
- being unconvinced that there is good planning for their communities, as compared to communities experiencing fewer projects.

These community members want increased communication, to be involved while there is time to affect project outcomes, and to feel genuinely represented by the people who are consulted.

These are just some of the results on how cumulative impacts are affecting Australian communities. Check out I2S' *Australian Perspectives on Infrastructure* report for full results, drawn from surveys with over 5,000 Australian community members, including more than 1,600 community members in infrastructure-intensive locations across the East Coast, where most of Australia's infrastructure activity is occurring.

Delays are on the rise, and industry experts agree that cumulative impacts are a factor

The 2021 I2S State of Infrastructure and Engagement Survey found that stakeholder and community pressure remains one of the top three causes of project delay. Delays are on the rise with just 19% of projects reported as being completed on time and on budget in 2020, down from 76% in 2018.

Within the same survey, 81% of respondents agreed that cumulative impacts are increasingly affecting the delivery of major projects. Almost two-thirds of respondents (74%) 'agree' or 'strongly agree' that a place based approach will improve infrastructure delivery.

More work is required to achieve a place based approach to infrastructure

Just over half of industry respondents in the 2021 State of Infrastructure and Engagement Survey (51%) 'agreed' or 'strongly agreed' that Australia's current project environment is contributing to community opposition, where opposition may be less about the individual project and more about the accumulation of effects from multiple projects operating in one local area. About half of respondents (48%) also 'disagree' or 'strongly disagree' that regulatory regimes are well equipped to deal with cumulative effects through place-based approaches. Yet the great majority of professionals surveyed (74%) also 'agree' or 'strongly agree' that place based approaches 'will improve the likelihood that projects are delivered on-time and on-budget'.

I2S research shows that place-based approaches can improve project delivery and communities' experiences but regulation is ill-equipped to support such approaches.



ANU Institute for Infrastructure in Society

About I2S

The ANU Institute for Infrastructure in Society is Australia's leading research institute working to transform the relationship between major projects and communities. Home of the Next Generation Engagement program, our flagship research agenda. I2S is proud to call the ANU Crawford School of Public Policy home. At I2S we work hard every day to deliver unique, sector-level research insights. We aim to:

- inform improved community engagement
- address cumulative impacts of major infrastructure projects
- support improved social risk management
- shape public policy for societal benefit.

I2S works in direct partnership with industry, government, civil society and communities. We are committed to highly engaged research that values the close, effective and meaningful working-together of academics and non-academics to generate new knowledge and practice transformation.

An interactive version of our Annual Report, including webinar and events videos, publications and reports is available at: <https://bit.ly/I2SAnnualReport2021> or scan at right.



We would like to acknowledge and thank I2S' Major Partners, Lendlease, the Queensland Government Department of Transport and Main Roads, the South Australian Government Department for Infrastructure and Transport, Transurban and the Victorian Government Major Transport Infrastructure Authority and IAP2 Australasia. The insights provided here are made possible by the regular participation of hundreds of individuals and community members engaged in Australia's infrastructure sector. We thank each of you for sharing your time, ideas and expertise.
