

Media Release

IPWEA warns of increasing knowledge gaps in its Infrastructure Australia audit submission

18 November 2019

For immediate release:

The Institute of Public Works Engineering Australasia has formally responded to the Infrastructure Australia Audit 2019 that reviewed and explored the infrastructure challenges and opportunities facing our communities over the next 15 years.

IPWEA's response was compiled by its asset management team and focuses on the audit's cross-sectoral chapter, 'Industry efficiency, capacity and capability'. The main assertion is that by improving decisions made by governments today, we will ensure the needs of the present generation are met without compromising the ability of future ones to achieve equal or higher standards.

IPWEA has proposed to Infrastructure Australia that:

- Sustainable outcomes for entities providing services from infrastructure depends on effectively managing likely developments and unexpected shocks in the future without needing to introduce economically significant or socially destabilising income or expenditure adjustments;
- Governments at all levels need to implement an Asset Management Strategy showing service level, cost and risk trade-offs that provide credible advice to decision-makers based on several informed scenarios; and
- Expectations from asset management and long-term financial planning should be set to maintaining sustainable organisations that can clearly communicate the implications of affordable and aspirational services for their communities.

"Until we have confidence and competence in the supporting data and systems, skills and evaluative techniques, all asset and financial management data can be indicative at best and potentially misleading," said IPWEA Australasia President, Mat Greskie.

"Although significant progress has been made in implementing management systems, it is apparent an ongoing process of monitoring and continuous improvement across all sectors on a consistent evidence-based approach is needed.

"Given the longevity of community infrastructure, effective management of these assets is crucial. Their current and future management processes must provide for the true lifecycle costs to be accurately captured, evaluated, and reported regularly and with uniformity.

“With the right legislative framework, supportive guidance and follow-up, significant improvement in the performance and management of infrastructure is possible and additional investment may not, in all instances, be required.”

IPWEA has proposed to Infrastructure Australia that the Australian Government:

1. Implement and maintain a credible, consistent and scalable Asset Management Framework across all levels of government;
2. Promotes the benefits of applying sound asset management principles; and
3. Audits long-term asset management and financial plans so they are aligned, credible, reliable, up-to-date and compliant with best practice.

On behalf of IPWEA’s members and stakeholders Greskie advised Infrastructure Australia that many asset intensive organisations are experiencing information and knowledge gaps in their overall infrastructure planning processes.

“Separate to policy and long-term planning mechanisms recommended by IPWEA, the looming skills shortage in engineering and public works is also a pressing concern for our members,” he said.

“Research conducted by IPWEA NSW Division shows that more than half of qualified engineers are over the age of 50, yet only half of councils actively support cadetship programs.

“We must work collectively for investment to attract, retain and assist with the training of qualified engineers, especially in regional centres, to build the sector’s capacity to sustain assets and infrastructure for public safety and community growth.”

ENDS

See the following pages for the IPWEA Submission to the Infrastructure Australia Audit 2019.

For interviews

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About IPWEA

The Institute of Public Works Engineering Australasia is the peak not-for-profit association for public works and engineering professionals across Australia and New Zealand. It provides training, publications and advocacy to support its 4,000-plus members and 20,000-plus community of engineering professionals who provide essential community infrastructure. Visit www.ipwea.org.

Who are we?

The Institute of Public Works Engineering Australia (IPWEA) is a not for profit professional association. It provides member services and advocacy for those involved in delivering public works and engineering services to the community. The IPWEA group is comprised of the Australasian Division, State Divisions in New South Wales, Queensland, Victoria, South Australia, Western Australia and Tasmania, along with a Special Division in New Zealand. Our mission is:

To be the peak Australasian professional association that leads public works and services, infrastructure planning, delivery and operations.



IPWEA has expanded its traditional local government engineering focus to the broader public works sector, covering all tiers of government as well as the private sector, which comprises 40 per cent of IPWEA membership.

Almost all of Australia and New Zealand's professional consultancy firms that specialise in public sector infrastructure – including roads, water, power, rail, ports and airports – have managers and staff who are members of IPWEA.

INFORMS. CONNECTS. REPRESENTS. LEADS.

IPWEA is a Technical Society of Engineers Australia, providing savings and additional benefits to members including accreditation of qualifications, training, networking and exchange of specialist expertise. The IPWEA State and Special Divisions are at the coalface providing support to members and addressing the challenges faced by public works professionals in the various regions.

We have representation on various International Standards Organisation (ISO) and Standards Australia technical committees and working groups.

Our Response to the Australian Infrastructure Audit 2019

Overview

The Australian Infrastructure Audit 2019 is clear in stating Australia is facing a future of uncertainty due to changing circumstances and increasing community expectations.

The message from each sector in the report is that more must be done if we are to maintain, let alone enhance our quality of life and economic efficiency, a message IPWEA supports and aligns to **our vision**:

To enhance the quality of life of our communities through public works and services.

IPWEA has for many years observed a growing concern not only from our members but the broader infrastructure sector including regulatory and audit sector(s) about the sustainability of our civil infrastructure networks and the services they deliver.

When we talk about sustainable infrastructure, we see a need for stronger links between economic and environmental initiatives supported by strong governance and leadership.

There is increasing recognition that organisations have been making short-term investment decisions on maintenance and capital renewal that may not be sustainable over the long term.

At the same time – as stated in the Audit – there is a demand to build new and/or different infrastructure:

Infrastructure needs are changing forcing innovation and reallocation of available resources to where the greatest need is

The perfect storm of ageing infrastructure, areas of both growing and declining population plus constant and changing circumstances is creating challenges for governments, infrastructure managers and planners.

To help drive better outcomes from infrastructure we see a role for IPWEA in supporting all levels of government, asset custodians and service providers in determining investment priorities for the 2021 release of the Australian Infrastructure Plan.

Our submission is focussed on the value IPWEA can offer in policy reform

Rationale

Quality services from infrastructure are critical for our economies, yet evidence suggests insufficient resources are allocated to sustainably manage services from infrastructure. There is a need to prioritise budgets, risks and service levels delivered by all tiers of government on a consistent basis.

Sustainability goes beyond technical management. Sustainability should be led by our decision-makers and supported by a credible and scalable Infrastructure Asset Management Framework.

The pursuit of sustainability requires informed community discussion and debate around agreed and affordable services coupled with trade-offs on cost and risk.

These discussions cannot take place without a clear understanding of the performance of existing assets, implications of acquiring new assets required to meet demand and growth, and the cost of asset consumption.

Over the past decade or more, local governments have committed resources to the pursuit of responsible service delivery from infrastructure.¹ Over this time there have been significant learnings along the way, but evidence suggests there is more to do.

Without question, the asset management journey has not finished and there is more to do.

Until such time as decision-makers are provided with and are aware of the service options, the ability and legitimacy in making informed trade-off decisions and ongoing financial and environmental sustainability will be difficult to achieve.

Perceptions around funding gaps can be misleading and counter-productive especially if the evidence base for additional funds is weak. Until Infrastructure Asset Management Plans include stronger and more mature discussion on the strategic trade-offs between service delivery, cost and risk, the future will remain uncertain.

Politicians and executives are the key people to lead this process and a concerted effort to provide reliable data, information and capacity for those charged with supplying credible decision support needs to improve.

Like the Australian Infrastructure Audit findings, many studies and enquiries into the most asset intensive of all levels of government – local government – have identified the following challenges.

¹ In 2007, all levels of government agreed on three Frameworks to improve local government's financial sustainability and management of assets.

Key Challenges

Local Government had a total income in 2016-17 of around \$45bn², this is dwarfed by the \$345bn³ in fixed assets it needs to manage and maintain. This represents an investment of approximately \$14,000/person⁴. Local government, like other levels of government and most other infrastructure authorities are often large and complex businesses.

1. Of the three levels of government, local government is the most asset intensive.

It should be 'core business' to manage and report on our long-lived assets yet the confidence in the data and information we use is lacking and there is often a disconnection between operational and financial reporting.

We can't afford to get this wrong. Reporting and auditing of the management and financial processes requires closer scrutiny. Management auditing, not just auditing of accounts, is critical to this process.

2. Poor incentives for proactive long-term planning

While many large urban Local Governments are largely financially sustainable, regional Local Governments experience mixed financial sustainability and rural and remote Local Governments are likely to have sustainability problems.

This horizontal fiscal imbalance⁵ is partly addressed by fiscal transfers such as Financial Assistance Grants, and the sustainability outcomes for many Local Governments are dependent on the maintenance of these external revenue streams which are outside of their control.

Combined with short-term election cycles, increasing regulation and community expectations in a tight resource environment provides little incentive for proactive long-term planning for the preservation and provision of public assets.

As a result, ageing infrastructure is often managed in a reactive day-by-day triage mode. To view this in another light, the long-term 'thinking' capacity of government is regularly deferred and its capability to deliver sustainable services to our communities could be questionable.

To ensure intergenerational equity, a proactive long-term business plan is needed that addresses the imbalance of project-by-project distribution of funds to a more proactive and sustainable model that demonstrates a sustainable outcome.

² ABS Cat. № 5512.0, Table 339, 2016-17 Operating Statement.

³ ABS Cat. № 5512.0, Table 339, 2016-17 Balance Sheet, less \$81bn in non-depreciable land assets.

⁴ 24.6 million population, ABS Cat. №3101, June 2017.

⁵ Horizontal Fiscal Imbalance is the mismatch in the revenue powers and expenditure responsibilities of one level of government.

3. Subjective performance measurement of infrastructure and service delivery

Services provided by roads, rail, ports, telecommunications networks and energy infrastructure are essential inputs into the activities of most Australian businesses. Infrastructure performance therefore has implications beyond the infrastructure sector. Current infrastructure performance measures often reflect the priorities of infrastructure owners and/or operators rather than those of customers, and therefore may overlook the changing needs of customers.

Measures of performance for constructed assets can be subjective, often highly simplistic, out of date and/or incomplete. They can oversimplify the complex relations that exist between demands, condition, function, utilisation, cost and risk.

Local government interestingly has consistently reported against eight road system performance measures since 2005 providing a simple, consolidated national local roads reporting system.⁶

In addition, local government regularly reports against key infrastructure assets under its control such as buildings, parks, stormwater, water and wastewater, airports and aerodromes in their Annual Reports, Financial Statements and the National State of the Assets Report.

4. Governance and maturity levels are stalling

In 2007, all levels of government agreed on three Frameworks to improve local government's financial sustainability and management of assets.

The then Local Government and Planning Ministers' Council (LGPMC) endorsed a nationally consistent approach in assessing:

1. Financial sustainability of local councils;
2. Asset planning and management; and
3. Financial planning and reporting.

The LGPMC agreed to implement the Frameworks through the Local Government Reform Fund⁷ valued at \$19M commencing in 2009.

A 2018 Australian Local Government Association Report⁸ found a decline in the number of councils having adopted asset and financial plans, raising concerns around the currency and credibility of these plans to meet the minimum requirements prescribed by legislation. This trend is not just being seen in cash-strapped rural and regional councils. There is evidence of this in urban metro areas as well.

This is concerning given the need to account for regional differences in population, climate and topography plus increasing (and ageing) population in the major cities.

⁶ Refer to the National Local Roads Data System (ALGA)

⁷ <http://test.regional.gov.au/local/LGRF.aspx>

⁸ ALGA, 2018, National State of the Assets Report.

5. Skills shortage and preparedness

A Local Government Skills Shortage Survey⁹ completed by almost half of Australia's councils revealed almost 70 per cent of local governments are facing a skills shortage whilst the skills gap increases.

Key occupations such as engineers and town planners, building surveyors, environmental health officers and project managers topped the list.

In the survey, all council staff revealed the need to improve soft skills, particularly those relating to digital technology.

Seventy per cent said they were poorly equipped for future digital demands with 70 per cent having done no forecasting of changing skill requirements arising from digital disruption. Notwithstanding these challenges, there are several opportunities IPWEA believe can and should be pursued.

Key Opportunities

To help drive better infrastructure outcomes for all Australians there is a need for continued and improved collaboration across all spheres of government.

A focus on capability (i.e. regulation and audit) and capacity building (i.e. resource allocation) is needed to ensure sustainable community assets and services into the future.

Most asset intensive entities including local government have the financial capacity to address future scenarios provided they have a sensible and informed conversation with their stakeholders.

1. Need for audit and follow up

A simple ongoing program that audits asset and financial plans to understand their currency, update frequency and maturity would help ensure alignment with the Local Government and Planning Ministers' Council decision and the National Framework. This need not be costly or complex or require additional analytical auditing skills. Instead, it could simply assess whether up-to-date plans meet minimal legislative requirements.

Experience has shown that with the right legislative framework, supportive guidance and follow up, significant improvement in the performance and management of assets is possible – and necessary. Additional revenue may not, in all instances, be required.

2. A sustainable position is possible

Local government has made significant headway in sustaining services to their communities by increasing investment to extend the life of ageing assets and renewing existing assets.

⁹ ALGA, 2018, Local Government Workforce and Future Skills Report.

There are many indicators suggesting more can and should be done to avert further criticism and challenges in achieving and maintaining a financially sustainable position.

Our experience across the country shows that financial sustainability for most local governments can be achieved. The question is at what level of service and risk? Most current asset management plans fail to answer this question.

This will require a strategy and plan to be developed based on revenue, service level and risk trade-offs – not on aspirational and possibly unaffordable infrastructure investment based on poor data.

Councils will need to make strategically aligned decisions; and audit committees will need to assume a role in considering and reporting the risks facing the financial sustainability of each council.

Solid commitment in this area should cement local government's role in the next iteration of the Australian Infrastructure Plan.

3. Consider drivers for change

Infrastructure owners and custodians with a high-level asset management capability feel confident regarding the integrity of the underlying data used by their systems. They can rely on it to make decisions, highlight opportunities and identify and manage risks.

Urban-metro areas now have population growth rates at levels not witnessed since the 1950s. It is essential we demonstrate a clear understanding of how infrastructure is complying with its intended and future purpose (function) and its capability to stand up to under- or over-utilisation (capacity) factors.

Local government has been reporting regularly on these measures since 2012 via the National State of the Assets (NSoA) Report – refer below for more detail on this initiative.

4. Provide support to those who need it most

For local governments and other infrastructure providers dependent on grants, planning will be critical to their future. They will need to manage community expectations regarding the delivery of services within the bounds of their available revenue sources.

Without intervention there is likely to be an increasing inability to meet the future needs demanded by our community. It is essential that forecasts increase in confidence and affordable finance is allocated at the most appropriate time to mitigate risks to future services caused by past infrastructure decisions.

IPWEA believes a consistent and scalable framework can be the catalyst for equitable distribution of funds to ensure sensible and sustainable outcomes for all Australians.

5. Strategies for improving future workforce capacity and capability

Australia is ramping up investment in infrastructure. To be ready, we need a capable and skilled workforce and effective workforce planning will be essential to enable a successful transition.

Improving an organisation's capability should be supported by workforce strategies based on a thorough assessment of workforce needs and risks, and well-considered options for addressing those needs and risks. This enables organisations to invest resources more effectively by designing targeted initiatives.

Registration of engineers who provide professional services at a national level is critical part of achieving this outcome and brings Australia in-line with global efforts to establish the reputation of engineering as a critical profession.

Further opportunities exist to promote local government as a place-based employer of choice and increase apprenticeship, cadetship and traineeship programs, but local government can't do this alone.

Summary

Sustainable outcomes for entities providing services from infrastructure means being able to manage likely developments and unexpected shocks in the future without needing to introduce substantial and economically significant or socially destabilising income or expenditure adjustments.

Expressed a different way, the decisions made by governments must ensure the needs of the present generation are met without compromising the ability of future generations to meet their needs.

Governments at all levels need to implement an Asset Management Strategy that shows service level and risk trade-offs and provide advice to decision-makers on what is affordable. The expected outcome from credible asset management and long-term financial planning is financially sustainable entities that can clearly communicate both affordable and aspirational service levels for their communities.

Until we have confidence and competence in the supporting data and systems, skills and evaluative techniques, all asset and financial management data can be indicative at best and potentially misleading.

A long-term national infrastructure plan needs to account for changing circumstances ensuring risks and equitable access to local services and infrastructure for all communities.

Although significant progress has been made in implementing management systems, it is apparent an ongoing process of monitoring and continuous improvement across all sectors on a consistent evidence-based approach is needed.

It is evident that many asset intensive organisations have increasing ‘information and knowledge gaps’ in their overall infrastructure planning processes.

Given the long-life nature of infrastructure it is crucial to demonstrate effective management of these assets and that current and future management processes provide for the true lifecycle costs to be accurately captured, evaluated, and reported on a uniform basis.

To realise the benefits of applying sound asset management principles, IPWEA sees the need to:

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- 4. Implement and maintain a credible, consistent and scalable Asset Management Framework across all levels of government.*
 - 5. Promote the benefits of applying sound asset management principles.*
 - 6. Audit long-term asset management and financial plans so that they are aligned, credible, reliable, up-to-date and compliant with best practice.*
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Experience has shown that with the right legislative framework, supportive guidance and follow up, significant improvement in the performance and management of infrastructure is possible and that additional investment may not, in all instances be required.

What we do

Much of what IPWEA does aligns with Infrastructure Australia's vision:

Improving the quality of life of all Australians through better infrastructure and services

IPWEA provides guidance material and training solutions for public works officers and professionals on asset and financial management in the context of managing and delivery of services from infrastructure assets. We work closely with our State and Special Divisions, other public works associations and government agencies in the development and provision of these services.



IPWEA also provides members with opportunities to network with colleagues at local, state, national and international conferences.

IPWEA lobbies state and federal governments for policy improvement and funding to undertake projects that benefit the public works industry.

IPWEA provides guidance material and training solutions for public works officers and professionals on asset and financial management in the context of managing and delivery of services from infrastructure assets.

The image shows two promotional banners side-by-side for IPWEA manuals.

IIMM International Infrastructure Management Manual
Your platform to deliver sustainable infrastructure services; aligned with the ISO 55000 suite of asset management standards.
FIND OUT MORE

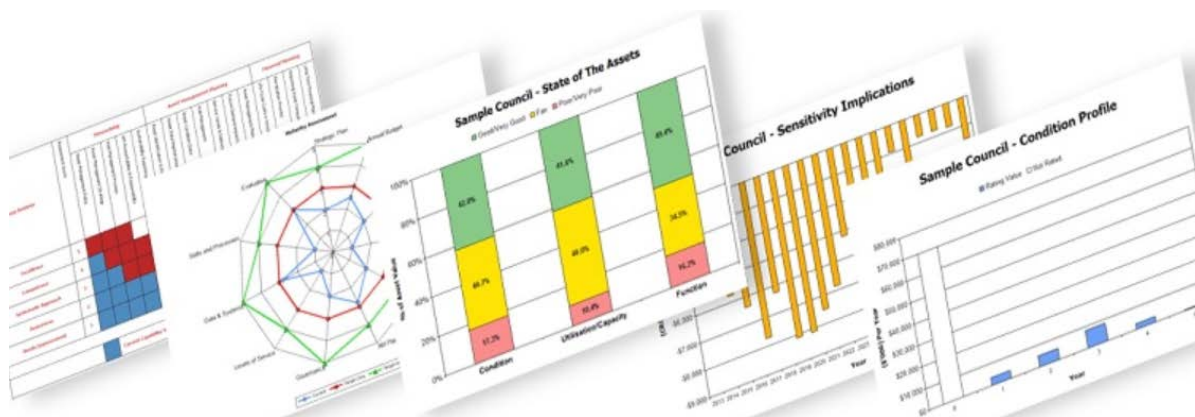
AIFMM Australian Infrastructure Financial Management Manual
The IIMM's companion manual, the AIFMM principles is a guide to international practitioners on how to implement sustainable financial management for infrastructure assets.
FIND OUT MORE

IPWEA's publications and resources promoting the sustainable management of public infrastructure assets include the:

- International Infrastructure Management Manual ([IIMM](#)),
- Australian Infrastructure Financial Management Manual ([AIFMM](#)),
- Professional Certificate in Asset Management Planning ([ProCertAM](#)),
- Guided Pathway for Asset Management Planning ([NAMS.PLUS](#)), and
- A series of peer reviewed guidance documents known as [Practice Notes](#).



Training for writing asset management plans, strategy and policy is provided using [NAMS.PLUS](#)¹⁰, an online guided pathway for Asset Management Planning, and Long-Term Infrastructure Financial Management and Planning throughout Australia and internationally.



Since its implementation in 2007, NAMS.PLUS has an increasing subscription base in the Australian Local Government sector with more than 300 councils (55 per cent) currently subscribed. Organisations outside of local government, including international clients, brings the total number of subscribing organisations to more than 550.

Building capacity and competency in asset management and financial planning and reporting for the local government sector is a key focus of our work with growing interest emerging from other sectors.

¹⁰ [NAMS.PLUS](#) is an internationally recognised capacity building toolkit aligned with IIMM and ISO 55000, supporting Asset Management practices and consistency between financial and asset management data.

Important Research Material

The National Assessment Framework

A key part of the Asset Management Strategy is an assessment of the organisation's maturity and capability to sustainably manage its community infrastructure through effective asset management and financial planning.

The National Assessment Framework (NAF) developed for Australian local government by the former Australian Centre of Excellence for Local Government (ACELG) and the Institute of Public Works Australasia (IPWEA) provides the core asset management competencies required for local government to determine progress in implementing the Local Government and Planning Ministers' Council (LGPMC) Financial Sustainability Nationally Consistent

Frameworks otherwise known as the National Asset Management Framework (NAMF)¹¹. The NAF is a structured online questionnaire developed by the IPWEA to evaluate progress with implementing the elements of the LGPMC NAMF.

The main objective is for local government to focus on achieving, maintaining (and hopefully surpassing) 'core' level asset management and financial planning maturity under the NAMF to ensure it can at the very least:

- Record and report on the state of all assets to the community;
- Meet current statutory reporting requirements;
- Ensure community safety; and
- Provide management information to guide decisions by councils on the cumulating impact of decisions.

National State of the Assets (NSoA) Report

Since 2012, the Australian Local Government Association has encouraged all Australian councils to participate in an annual self-assessment survey of their infrastructure performance and management practices known as the [National State of the Assets \(NSoA\) Report](#).

Whilst optional, participation has increased with 408 (>75 per cent) local governments across Australia providing data for the 2018 National State of the Assets Report.

To date, the NSoA Project has delivered significant outcomes:

- Proof of the concept that local government can provide consistent, evidence-based infrastructure performance reporting for use by all levels of government (ref: NSoA Pilot 2012);
- A complete performance reporting result for sealed and unsealed road assets and concrete and timber bridges in terms of condition, function, and capacity indicators (ref: NSoA Report 2013 & NSoA Report 2014);
- An updated and complete performance reporting result for all key infrastructure groups for which local government has responsibility (ref: NSoA Report 2015); and
- Consistent trend analysis enabling past comparisons and projections for future investment in local government infrastructure in Australia (ref: NSoA Report 2018).

¹¹ Local Government Financial Sustainability Nationally Consistent Frameworks, Framework 2, ASSET PLANNING AND MANAGEMENT, May 2009.

As the peak association for the professionals who deliver public works and engineering services to communities in Australia, IPWEA believe now is the appropriate time to continue the project in partnership with ALGA.

The National Local Roads Data System

The National Local Roads Data System (NLRDS) is a valuable tool for the development of cases for all levels of government for assistance and financial support for local roads. It is designed to demonstrate local government's credibility, capacity, and leadership at a national level and is the only credible source of inventory, financial and expenditure data in Australia.

Whilst an Australian Local Government Association initiative, the NLRDS is operated by the Institute of Public Works Australasia (IPWEA) on behalf of ALGA. IPWEA provides day-to-day operational services for NLRDS including first point of call and help desk services.

Data is collected and aggregated from existing sources from each State Local Government Grants Commission office and Australian Transport Safety Bureau since 1999 and compliments the next steps of the NSoA Project. Further information can be found [here](#).

[Access to the data is available on a 'low cost, high value' basis. Access to basic data is freely available on the web, with more detailed requests considered on a case by case basis.](#)

Road Asset Benchmarking Project – IPWEA (NSW)

The IPWEA (NSW) Roads & Transport Directorate commissioned the Road Asset Benchmarking Project to provide a snapshot of the current reported condition of Regional and Local Roads in NSW, an estimate of the shortfall in funding necessary to bring them to a satisfactory condition and specific recommendations about rectification of the problems identified. The first report was launched in 2005 resulting in the publication of two reports titled:

1. Road Management; and
2. Timber Bridge Management.

Additional Benchmarking Surveys have been carried out every two years to identify changes that have occurred and to establish trends in asset management.

These reports have been used to support the need for increased funding to ensure that road and bridge assets are adequately maintained, and that local government is financially sustainable in to the future.

The data has supported decisions by other levels of government to extend the Roads to Recovery program and to establish the Regional Road Timber Bridges Program. The data has been referenced by other reports e.g. Engineers Australia Infrastructure Report Cards and the Australian Rural Roads Group report detailing the rural local roads crisis.

Further information can be found [here](#).