



# Innovation: an Emerging Leaders Perspective

Findings Report 2023  
Fiona McDonald



# About Roads Australia (RA)

Roads Australia is the peak body for roads within an integrated transport system. We bring industry, government and communities together to lead the evolution of Australia's roads, integrated transport and mobility networks.

Our members include all of Australia's transport agencies, road owners, major contractors and consultants, material suppliers, service and technology providers, and other relevant industry groups.

Roads Australia upholds the principles of a safe, inclusive, sustainable, economic and socially valuable roads industry for all Australians.

We strive to achieve a robust integrated transport system for people and freight that values and invests in all modes of land transport.

# Emerging Leaders PPP Award

Roads Australia annually awards the PPP Award to an emerging leader who shows Promise, Passion and Pursuit within the transport industry.

The recipient will have the opportunity to engage in a 12-month industry ambassador experience and observe and understand how leaders interact and make decisions, and to play an integral role in the growth and development of the Emerging Leaders Program.

In 2023 Fiona McDonald was the recipient of the PPP Award. Fiona is a Senior Manager Industry Affairs & Partnerships, Industry Engagement & Development at Transport for NSW.

Fiona is a talented senior manager with a passion for transforming the infrastructure and transport sector for the better. With close to a decade of experience across Australian and international governments and the private sector, she has honed skills in project and program management, governance, public policy development, strategic thinking and stakeholder engagement.

Fiona has led the development of complex road infrastructure projects in Western Sydney and the United Kingdom where she oversaw the roll-out of industry leading innovation programs. In 2020 she also played a key role in the coordination and communication response for the NSW Bushfire Clean-up Program winning a NSW Premier's Award and IAP2 Core Values Award.

As part of Fiona's ambassadorship, she embarked on a project to shine a light on the processes and mechanisms that encourage innovation in the infrastructure sector. The goal is to share these learnings across Roads Australia's members to enhance to productivity of the industry. This report is a summary of her findings.

**RA PPP AWARD  
WINNER 2023**  
**Fiona McDonald**  
Transport for NSW





# The opportunity

The Australian infrastructure sector is at a critical point in time as it seeks to deliver a once in a generation pipeline of work in the face of a tightening fiscal environment.

The industry must leverage existing investment to transform itself to be more sustainable, inclusive, and productive.

In its 2023 Market Capacity report Infrastructure Australia told us that productivity has stagnated in the construction sector for 30 years. At the same time the industry is being asked to deliver a five-year pipeline valued at more than \$230 billion with a labour shortage estimated to be around 229,000 full-time infrastructure workers.

While many of the factors influencing the pipeline are beyond our control. As professionals working in the industry the way we respond to these challenges is. The opportunity for us is to find ways to work smarter, not harder to realise positive changes across the sector.

“We cannot solve our problems with the same thinking we used when we created them” ALBERT EINSTEIN



# The approach

The approach was to explore areas where innovative culture is happening across the sector and gain an understanding of the systems and mechanisms in place that were encouraging it to flourish.

To achieve this, a mix of qualitative and quantitative data was required, including:

- A survey was sent out to all Roads Australia members through their monthly newsletter to answer a set of standard questions.
- Over 50 1:1 interviews were undertaken with Roads Australia members from across Australia and the infrastructure sector. This included a broad range of disciplines including constructors, designers, policy makers, road operators & maintainers, lawyers, government officials, start-ups, academics, and organisational psychologists.
- Site visits to speak with innovation champions on the ground to hear first hand experiences of managing productivity challenges on site.

The challenges that innovation faces on our projects were delved into, but instead of focusing on the barriers and blockers, the mission was to focus on the areas where innovative culture is happening with the goal of exploring the principles that encourage it to thrive.

The following sections highlight the key findings of this work along with supporting case studies from across Australia and internationally. We hope through sharing them, it will increase productivity through innovation in our sector.

## WHAT IS INNOVATION?

It is important to define innovation. It is too easy to relate innovation with technology, when it can be so much broader. For the purposes of this report, innovation is defined as:

**‘Innovation is change that adds value.’**

This can be small incremental changes on a project scale to increase efficiency and safety on site, all the way up to policy changes that improve sector-wide productivity and sustainability outcomes.

“Productivity will only come if we build a culture of innovation. This can be done by building confidence in continuous improvement.”

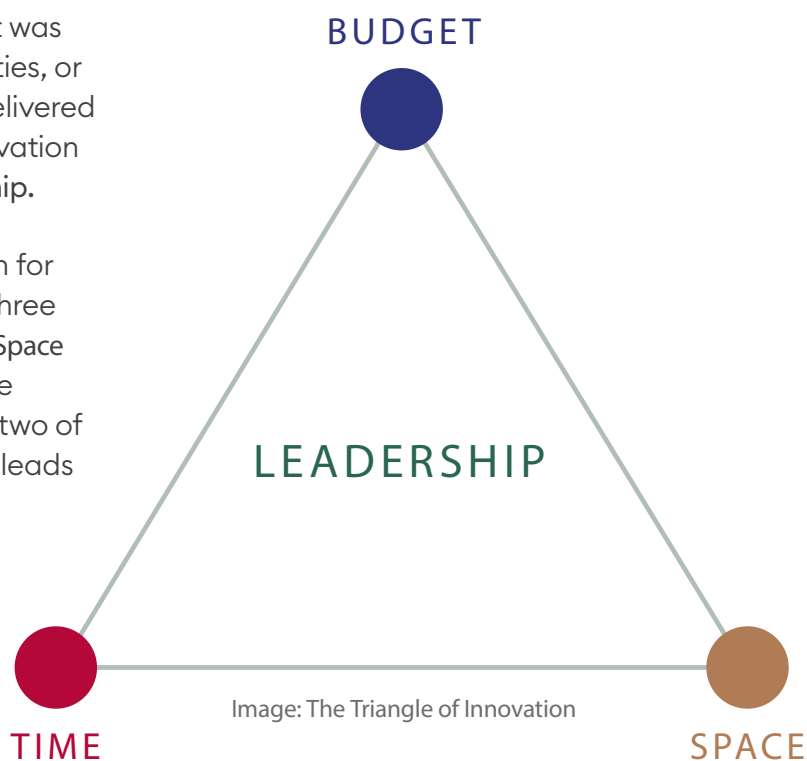
QUOTE FROM INTERVIEWEE

# The findings

Throughout the course of the interviews and feedback, it became clear innovation can happen anywhere, but it requires critical levers to be pulled for it to flourish.

It did not seem to matter where a project was located from regional areas to capital cities, or the commercial models' projects were delivered under. The critical foundation for all innovation learnings that were shared was Leadership.

If leadership is considered the foundation for innovation to flourish, it is supported by three key levers that ensure its success – Time, Space and Budget. For an innovative culture to be rooted in a project you will need at least two of the three levers pulled, however all three leads to increased success.



“There is a perspective shift that needs to happen with regards to innovation...” QUOTE FROM INTERVIEWEE



## LEADERSHIP

It was critical that at project inception that leadership made innovation a priority and supported the establishment of systems and processes to encourage it. This was not just a one-off task, but required consistent and sustained effort to carry it through the whole life of the project.

However, the earlier the innovative processes and culture can be established the better, with the largest impact of innovation and productivity gains being at the start of the project well before any shovels are in the ground.

The innovative approach to leadership can be established across all levels, from the organisational down to the project, and it takes many different forms. Interviewees shared the various approaches to innovative leadership they had seen adopted both in Australia and internationally:

- Establishing an organisational innovation leads - such as Queensland's Executive Innovation Champion at the Department of Transport and Main Roads who shines a spotlight on innovation and encourages a future focus.
- Empowering innovation leads/champions on projects – such as examples from the UK with a Lean Director having a seat at the Project Directors' table along with Commercial, Delivery, Health & Safety, Risk, Environmental and other project leads.
- Developing innovation and creative thinking Subject Matter Experts (SMEs) and imbedding them on projects, who sit alongside Technical SMEs.
- Build innovative leadership frameworks to give direction, that allow teams to look in the grey zone not just the black and white – such as an approach from Western Australia based on [Edward De Bono's Six Hats Theory](#).
- Early engagement between clients and industry to build positive relationships to encourage innovation – moving away from only defining innovation as a high-level value, and towards defining specific innovation deliverables.
- Deliberately hiring people from other industries, with the purpose of increasing diverse thinking and bringing excellence from other industries into the sector.
- Creating a psychologically safe environment where new ideas are praised rather than dismissed – this may look different depending on if people are in the field or in office-based corporate roles.

The approach to innovative leadership requires a shift in thinking from innovation as noun (i.e. a case study example) to a verb to tell us how to innovate. It is in the micro not in the macro, with the focus also shifting to the smaller stuff with incremental changes rather than waiting for the 'big win'. This is often not obvious in the short term, however over time we have seen significant productivity gains. One interviewee even suggested simply switching the language to "improvement" rather than "innovation" had been seen to help boost results.



## TIME

This refers to creating time in project programs for innovation to happen. The earlier in a project lifecycle that time can be created for innovation, the better chance it has of succeeding to lead to productive outputs.

Projects that established a program that allowed for innovation in the inception and development phases created the opportunity for different options to be considered well before the critical points of delivery phase when cost would increase when any designs, processes or plans are changed.

### CASE STUDY: SOUTH AUSTRALIA DARLINGTON UPGRADE PROJECT

The Darlington Upgrade Project was an important stage of delivering Adelaide's North-South Corridor with the delivery of a 3.3 kilometres upgrade of the existing Main South Road. The project commenced in May 2016 and was completed in January 2021.

The project was in a high traffic area close to a major hospital, with three major bridges over a major freeway. The highly congested and constrained site required the project team to have the time to think differently during the planning phase.

The engineering team proposed building the bridges offline. While potentially not a cheaper option it answered a lot of the traffic issues and allowed for ambulance movements into the hospital while the project was under construction.

With the client's support, the contractor was able to progress with the approach, building two bridges offsite and rolling them into place over a weekend. The third bridge was built in between the two existing carriageways and then rolled into place.

The bridges were constructed one month apart so learnings could be taken from one bridge to the next.

The approach broke two Guinness World Records being the longest multi-span bridge to ever be delivered in this way in the world.

The time allowed in delivery planning and passion from the engineers drove the idea forward. The Project Team has since shared their approaches and findings at conferences, including the Structural Engineering Conference and Bridge Conference.

For more information check out the project [webpage](#).

TIME + SPACE

**“You need to create time and space for it as part for the project program. Make it simple rather than too hard – don't make it a tick box exercise instead empower the process.”** QUOTE FROM INTERVIEWEE





There is another opportunity to create time for innovation during the tendering phase between development and delivery. As part of the tender process delivery partners can be encouraged to consider innovative approaches to construction well before any plant is moved on to site.

### **CASE STUDY: NEW SOUTH WALES WARRINGAH FREEWAY UPGRADE**

The Warringah Freeway Upgrade will upgrade four kilometres of the Warringah Freeway, between High Street at North Sydney and Willoughby Road at Naremburn. The project commenced construction in 2022 and is expected to be complete in 2027.

Challenges of the narrow project site has forced the Project Team to think differently from the beginning. The corridor is one of the main commuter routes in Sydney with very high levels of traffic, as well as having high density residential areas nearby requiring minimising the impact to community with night works. This required the team to think of different solutions to be imbedded to achieve this project.

The Project Team created processes that recognised the challenges and were supported by the tender and contractual mechanisms that Transport for NSW (TfNSW) put in place to encourage innovation. The team used the exemptions process that asked what needed to be changed to achieve delivery outcomes during design. There were three types of exemptions used:

- Agreed Exemptions – these were hardwired into the Project Deed.

- Conditionally Agreed Exemption – these required further agreement with TfNSW Subject Matter Experts (SMEs) as part of the project’s development.
- Potentially Agreed Exemptions – these were used during delivery phase.
- The project required SMEs to have the confidence to make the call on exemptions and in a timely manner. There was a cultural shift around ‘just because it doesn’t conform to what has been done before doesn’t necessarily mean it is bad’ and the view that rules that aren’t quite right in that environment don’t need to be forced to apply.

This allowed the Project Team to use innovative approaches, including:

- Offsite Logistic Facilities at Wick’s Road in North Ryde – that the team describe as “Thinking outside the box – literally”.
- Use of a Zipper Barrier Machine that was the first construction project to use this approach in Australia, as historically they have been limited to use in road operations.
- Noise limit management models and planning.
- Pre-cast slot drains, that were outside the standard construction approach.

For more information check out the project [webpage](#).

**TIME + SPACE**

“Tender period is the best chance to innovate and having clients asking for it – if I have a smart client, I can deliver smarter.” QUOTE FROM INTERVIEWEE



Focusing on time also encourages using it for sharing lessons and ideas. This can happen at all phases of a project lifecycle from inspection with learning from past projects, through the delivery with looking to make on site processes more efficient, to finalisation and benefits realisation with sharing learnings for future projects.

Nearly all jurisdictions across Australia had some form of lessons learned sharing process through annual industry conferences, Communities of Practices, inter-company or agency record systems for learnings. However, nearly all interviewees agreed that there was a lot of room for improvement in this space.

It was agreed that lesson sharing sessions needed to be more than a “back slapping” exercise. Relationships need to be built between people of similar levels across organisations. More opportunities to meet people across industry and at the various levels from those at the coal face all the way up to executives.

### **CASE STUDY: WESTERN AUSTRALIA INDUSTRY SUSTAINABILITY STRATEGIC APPROACH**

In Western Australia the industry is looking at the overall functioning of the sector and how they can make it work better. Clients and Industry Partners have come together to form an Industry Sustainability Strategic Approach (ISSA) initiative.

ISSA is not about sustainability in terms of environment but making sure the industry can deliver infrastructure into the future. It looks at addressing challenges of pipeline, lack of people and the non-collaborative culture of the industry. It was these challenges that drove the initiative. It was identified that these were making it both hard to do business and keep people in the sector.

In November 2022, ISSA went through an initial scoping process with client agencies and was supported by consultation inputs and desktop review. Then in partnership with industry 4

working groups, each consisting of 16 people from across industry and government were formed. The groups kicked off in March 2023 and were focused on:

- **People** – focusing on training and culture.
- **Process** – contractual and commercial, including risk.
- **Supply chain** – availability of pre-qualified contractors to deliver pipeline, early procurement, and certainty of supply for materials.
- **Future Thinking** – Innovation and Technology.

The working group’s objective is to work through a proposal to develop a strategy to make the industry more resilient, to increase capacity and capability.

The initiative is expected to finish up in late 2023 with a fundings paper and framework to be shared across the sector.

**TIME + SPACE + BUDGET**



Interviewees also shared ‘better’ practice examples from what they are seeing overseas with regards to lessons learned sharing. As with the examples above the lessons learning process requires time to be allowed for it.

“We should be catching ‘innovations’ the same way as safety and sharing it.” QUOTE FROM INTERVIEWEE

### **CASE STUDY: UNITED KINGDOM CROSSRAIL LEARNING LEGACY WEBSITE**

Crossrail is a railway construction project centred around London. Its aim is to provide a high-frequency hybrid commuter rail and rapid transit system crossing the capital from suburbs on the west to east, by connecting two major railway lines terminating in London, the Great Western Main Line and the Great Eastern Main Line.

The project was approved in 2007, and construction began in 2009 and finally open in May 2022.

The project faced a number of budget overruns and time blow outs. As the project was so large the delivery strategy was to break it down into different smaller projects. However,

this resulted in siloed project teams and limited sharing of lessons learned along the way. There was limited coordination and constancy across the project.

In order to learn from these shortcomings, the project developed a learning legacy portal for all the different docs and lessons learned, which is housed on a publicly available website - <https://learninglegacy.crossrail.co.uk/>

They shared both the good and bad ideas to allow industry as a whole to benefit in the future. The website is well categorised and easy to filter and find information on all disciplines of the project.

**TIME + SPACE + BUDGET**



Time can also be used to develop capability, skills and understanding across the sector to encourage diversity of thought and innovative thinking. This allows for ideas to be shared across all phases of a project from inception to finalisation, as well as across disciplines from designers, contractors and government.

“Innovation is often thought to just be around technology, but to be innovative we need to actually look at the whole industry, including procurement, design, project management.” QUOTE FROM INTERVIEWEE

### **CASE STUDY: AUSTRALIAN CAPITAL TERRITORY – ENGINEERING SECONDMENT PROGRAM**

As part of the Australian Capital Territory (ACT) Government Engineering Workforce Plan, the ACT Chief Engineer launched a government to industry secondment program in 2021. The purpose of the program is to provide professional development opportunities for staff while strengthening working relationships between government and industry. The secondment program allows an early career engineer from the ACT Government, an engineering consultancy firm and a construction firm to undertake job swap placements. This allows the secondees to be involved in a number of high-profile infrastructure projects across the Canberra region through the different lenses of government, consultancy and construction.

The program is now an annual offering and has received high praise from those involved.

- Learning about the intricacies of how each organisation functions has enabled me to develop a more rounded understanding of the entire process to deliver infrastructure in

the ACT, which I don't believe I ever would have experienced if not for this program and I will take with me throughout my career.

- It has been eye opening for me in understanding more about the culture and functions of the organisations in the delivery of ACT infrastructure. To me, all of these organisations have the same objectives; to deliver high quality and useful infrastructure for the ACT community. This point can sometimes be lost due to the nature of belonging to separate organisations but through programs like this it has really affirmed for me that all parties have the same goal and deeply care about their profession.
- I've gained a greater understanding regarding buildability, quality control, coordinating consultants and trade packages, as well as awareness on some industry innovations.

If you would like further information on the Engineering Secondment Program you can contact the ACT Chief Engineer on [ChiefEngineer@act.gov.au](mailto:ChiefEngineer@act.gov.au).

**TIME + BUDGET**

## SPACE

This is about creating space for innovation both physically and mentally. The lever of Space works well in partnership with Time. Simply shaving off time in a program alone isn't enough to ensure an innovative culture and practices can flourish.

Creating space can happen in two different ways. One is by creating a physical space, room, online webpage or data room where ideas can be thrown around to brainstorm more innovative approaches to project challenges. Phases created the opportunity for different options to be considered well before the critical points of delivery phase when cost would increase when any designs, processes or plans are changed.

### **CASE STUDY: VICTORIA – LEVEL CROSSING REMOVAL PROJECT AND THE HIVE**

The Level Crossing Removal Project (LXRP) is an infrastructure upgrade program to remove and grade-separate 110 level crossings and to rebuild 51 railway stations on the metropolitan rail network across Melbourne. The project aims to improve network efficiency, rail safety and reduce traffic congestion.

Given the unique and repetitive nature of this project, it opened up an innovative opportunity. LXRP's approach to innovation and continuous improvement has been constantly evolving. Part of this approach was to develop the HIVE.

The HIVE is LXRP's improvement and innovation program – exploring, connecting and embedding ideas to improve program delivery and lead industry change.

The HIVE follows a clear framework for identifying, developing and operating ideas across the project, through:

- Idea sourcing – identify and obtain ideas and problems from a range of areas.
- Idea framing – take an idea and make the underlying problem behind it simple and clear.
- Idea development – Investigate and explore an idea.
- Pilot delivery – Procure and run a pilot or test of the solution.
- Pilot assessment – measure and assess the impact and value of the pilot and determine next steps.
- Operationalise – Scale and grow the solution across the program and industry

The idea behind the HIVE's approach is to invest in process and systems to be more efficient, encourage innovation and force the sharing of learnings across the industry.

The Alliance model on LXRP incentives through cash payments to industry partners to come up with new innovations that must be properly shared with everyone across the project and recorded. A second cash incentive is given to industry partners if they adopt a shared innovation.





The HIVE developed a SharePoint site that shares all the innovations, metrics and scores and tracks them through a PowerBI dashboard. Platform is open for everyone in the project Alliance.

The HIVE approach was to develop a step change in innovative culture and ideas generation across 3 incremental levels:

- Does the idea just effect you?
- Does the idea require management buy in?
- Does the idea effect the whole strategy of the project?

This approach allows for easier idea framing in SME heavy project teams.

For more information about LXRP's approach to innovation, check out the project [website](#).

**SPACE + BUDGET**

The second approach is encouraging the use of mental space to look at things differently. Leadership on projects that creates a culture of using the mental space effectively can lead to creative outcomes and opportunities to draw on ideas from other sectors and industries.

### **CASE STUDY: TASMANIA – BRIDGEWATER BRIDGE PROJECT**

The new Bridgewater Bridge project is Tasmania's largest ever transport infrastructure project. The new bridge will make travel safer and more efficient. It will connect local communities, create more open space and change the way people travel between the north and south of the state.

Major construction is underway and the new bridge will be open by the end of 2024.

Due to the size and complexity of the project the Tasmanian Government undertook an extend procurement process with early contractor involvement over nine months. The process started with a pool of contractors and gradually singled down to one proponent. The process allowed tenders to work up solutions with the client and look at risks and opportunities. This gave the client the opportunity to understand

what they might be buying and what risks they were happy to take on and related allocation of pricing. At the end of the process the project had two tenders both with very different solutions.

The project established a Design and Construct model set up to encourage innovation as there was more opportunity to drive innovative approaches upfront in the design process. Due to Tasmania's smaller pipeline, when compared to other states, this approach allowed the space for innovation as part of the procurement process.

The project is now being delivered with a marine approach, taking learnings from techniques often used in wharf projects, to the bridge's delivery with the use of barges so the bridge could be built largely offline.

To find out more about this project, check out the [website](#).

**SPACE + TIME**

“Best form of innovation is to copy – its about adding value here on this project. Copy what someone else is doing and bring it into this company/ project – doesn’t need to be something new just needs to bring increased productivity.” QUOTE FROM INTERVIEWEE

Using space may also be related to the establishment of a program that encourages innovative approaches to be brought forward and shared. This approach has been used in a number of other sectors (eg. IT Start-ups) and we are starting to see it being used more to resolve transport and place-based planning issues across Australia.

### **CASE STUDY: QUEENSLAND – QUEENSLAND’S COOPERATIVE & AUTOMATED VEHICLE INITIATIVE**

Cooperative & Automated Vehicle Initiative (CAVI) is the Queensland Government’s program of work investigating the benefits of connectivity and automation technologies on our roads. Enabling vehicles to securely communicate and to perform tasks autonomously has potential to create safer, cleaner and more efficient roads. However, these benefits need to be clearly understood, and the only way to do this is to develop and test them such as through CAVI.

The Queensland Government’s Department of Transport and Main Roads (TMR) is delivering some of the key elements of CAVI through

iMOVE. This included a connected vehicle trial involving over 355 drivers in Ipswich, and a Cooperative and Highly Automated Driving (CHAD) pilot with two research prototype platforms, one of which is a level 4 automated prototype vehicle.

The CAVI initiative requires strong collaboration between government, industry and universities working together in a co-located environment. This has enabled parties to develop and mature their products and services through shared learnings.

To learn more about this initiative check out the [website](#).

**SPACE + BUDGET**



## BUDGET

As with all ideas funding always helps, but without at least the time or the space created to encourage innovative thinking, throwing additional dollars at the ‘productivity problem’ won’t lead to innovative success.

Successful innovation that has focused on ‘Budget’ tends to be grant and funding programs with a clear challenge statement or issue that needs to be addressed. This leads to clear tangible outcomes, rather a host of random ideas that are thrown forward with no proposed follow through or implantability.

### **CASE STUDY: NORTHERN TERRITORY – EMERGENCY VEHICLE PRIORITY TRIALS**

The Northern Territory Department of Infrastructure, Planning and Logistics is funding and trialling an emergency vehicle priority (EVP) system to improve ambulance emergency response times. An EVP system allows ambulances to automatically trigger a green traffic light in advance of arriving at an intersection, when it is safe to do so. Passing through an intersection under green light conditions is faster and safer for emergency vehicles and other road users. Traffic signals will resume their normal cycle once the ambulance has passed through, minimising traffic disruptions.

The system will operate at traffic light installed intersections in Darwin along the Stuart Highway, Bagot Road and Trower Road. If successful, an EVP system could be rolled out to all ambulances, and be the basis of a system for use with fire and police services. The trial will run for 6 months from October 2023 to April 2024, with 6 ambulances fitted with the system.

**BUDGET + TIME**

“You don’t invest you aren’t going to get anything – research, time to play, pilots – People need the ability to play.” QUOTE FROM INTERVIEWEE





Interviews also highlight effective programs from overseas, where budget was a powerful tool to enhance innovation.

### **CASE STUDY: UNITED KINGDOM – NATIONAL HIGHWAYS DESIGNATED FUNDS PROGRAM**

National Highways is the custodian of the UK's motorways and major A-roads. They have a goal to work to make a positive difference on their network for people, the economy and the planet.

From 2020 to 2025 National Highways has invested £936 million in standalone – or designated – funding to meet this goal. This money is allocated to four funding streams focused on making improvements that will make the biggest difference and deliver lasting benefits:

- Safety and congestion
- Environment and wellbeing
- Users and communities
- Innovation and modernisation

To date the program has funded over 2,000 initiatives, including:

- 160 cycle schemes.
- 289 environmental initiatives, from improving biodiversity to increasing flood resilience.
- 6,437 lights and 226 traffic signals converted to LED reducing their carbon footprint.
- 159 innovation initiatives, including resurfacing roads with recycled tyres
- Better access to 45,000 new homes.

Find out more - [UK's Designated Funds Program](#).

**BUDGET + SPACE**

“Being first to innovate takes a lot of support and enablement to get ideas/approaches across the line but then the precedent is set for future projects.” QUOTE FROM INTERVIEWEE



Ringfencing budget within projects is another approach that has seen innovation flourish. This relies on strong leadership from senior leaders committing to and following through on reserving budget for innovation and when ‘times get tough’ on projects not dipping into it to supplement other budget pressured areas of the project.

### **CASE STUDY: NEW SOUTH WALES – M12 MOTORWAY**

The M12 Motorway project started construction in August 2022 and will provide direct access to the new Western Sydney International Airport at Badgerys’s Creek and connect to Sydney’s motorway network.

Early in the M12 projects development a strong urban design intent was set. It was a green field motorway servicing a new airport and in a new city. It was a ‘Welcome to Australia and a Welcome to Country’.

To ensure this intent remained a focus the project team pulled out a section of the budget and ring fenced it for a separate cost estimate on project specific urban design elements for Country, not just leaving it under the standard urban design section of the estimate. A set of rules were established that meant this budget could not be used for other parts of the project.

This innovative approach to budget has been integrated through the whole design process and alignment with Aboriginal artwork and connection to Country. It gave the project team the outcome that they wanted rather than something that was just tack on at the end.

To find out more about the project check out the [website](#).

**BUDGET + TIME**

“We need to move away from innovation as a ‘value’ but see it as a ‘deliverable’.” QUOTE FROM INTERVIEWEE

# Summary & next steps

The findings from this report have been shared with Roads Australia's Board and Future Leaders Committee.

The next steps will be for Roads Australia to share these findings wider through their members to encourage the implementation of these innovative practices of Leadership, Time, Space and Budget by governments and industry partners.

Key opportunities for Roads Australia and their members are:

## To continue:

- To create a platform for industry to sharing learnings on the Roads Australia websites and social channels through case studies.
- To create webinars and forums specifically for ideas sharing and support the creation of connections across jurisdictions to encourage implementation of innovative practices. This could include targeted sessions on disciplines within the sector to focus on each quarter (eg. Earthworks, Maintenance or Design).

## For potential implementation:

- Establishment of an 'Innovation Award' for the sector – not just announcing a finalist but creation of a 'Nominations Booklet' for all nominations to share their learnings via a brief case study and including key

projects contacts for those interested to seek additional information. This will turn the awards process from a marketing exercised into real knowledge sharing across industry.

- Establish a 'Lessons Learned Repository' that is well categorised and easy to filter and find information to lead a national approach to sharing. This could utilise content already being collected as part of the above points.
- Establish the opportunity for more targeted networking not just at the executive level, but all the way down to those delivering on the ground. This will create the opportunity for meaningful relationships between people of a similar level across the industry.
- Support 'project influencers (ie, Leadership Teams, Project Managers and Clients) to do training in innovation and build skills in how to think differently. This leadership style will then flow out across the industry.
- Support the consistent approach to demobilisation of projects to ensure programs include a week for lessons learned sharing and capture for every discipline.
- Push the narrative that innovation isn't just digital. Innovation comes in many different shapes and forms. Support the industry in opening our minds to the different opportunities.

"We're what we repeatedly do.

Excellence, therefore, is not an act, but a habit." ARISTOTLE

# Thanks

This report would not have been able to achieve these outcomes without the support of individuals from industry and government who volunteered their time to engage in the survey and interviews to share their learnings.



# Appendix

As part of the project approach for information gathering a survey was created and shared across all Roads Australia members via their monthly newsletter. However, with only nine formal responses, a large number for the early findings were drawn from the 1:1 interviews.

## Below is the survey:

As a member of the roads sector in Australia we invite you to complete this anonymous survey.

The survey aims to understand your perspective on the key mechanisms and process that encourage innovation of our

development and delivery projects today.

It will also seek to find out how you want to hear about this learnings from across the sector.

These results along with a series of interviews with key members from the sector will form the basis of a Findings Report expected to be completed in early 2024. The report will be used to kick start a 'roadmap' for innovation by Roads Australia.

The survey should take you no more than 10 minutes to complete.

### Q1 – What jurisdiction are the majority of your projects or work taking place in:

- |                              |                              |                              |                             |                                     |
|------------------------------|------------------------------|------------------------------|-----------------------------|-------------------------------------|
| <input type="checkbox"/> NSW | <input type="checkbox"/> VIC | <input type="checkbox"/> TAS | <input type="checkbox"/> NT | <input type="checkbox"/> Nationally |
| <input type="checkbox"/> QLD | <input type="checkbox"/> SA  | <input type="checkbox"/> ACT | <input type="checkbox"/> WA |                                     |

### Q2 – Are your projects in regional areas or capital cities:

- |                                       |   |
|---------------------------------------|---|
| <input type="checkbox"/> Regional     | <input type="checkbox"/> Both (Regional and Capital Cities) |
| <input type="checkbox"/> Capital City | <input type="checkbox"/> Other                              |

### Q3 – What category best describes the business you work in:

- |  |   |
|--|---|
| <input type="checkbox"/> Local Government            | <input type="checkbox"/> Industry body/Policy Think-tank        |
| <input type="checkbox"/> State Government            | <input type="checkbox"/> Industry partner – add branching to Q4 |
| <input type="checkbox"/> Federal Government          | <input type="checkbox"/> Road Owner/Toll Road Operator          |
| <input type="checkbox"/> Academia/Research Institute |   |

### Q4 – What category best describes your business:

- |  |   |
|--|---|
| <input type="checkbox"/> Tier 1 Industry Partner – Designer    | <input type="checkbox"/> Tier 3-4 Industry Partner – Constructor  |
| <input type="checkbox"/> Tier 2 Industry Partner – Designer    | <input type="checkbox"/> Small to Medium Enterprise – Constructor |
| <input type="checkbox"/> Tier 3-4 Industry Partner – Designer  | <input type="checkbox"/> Material Supplier                        |
| <input type="checkbox"/> Small to Medium Enterprise – Designer | <input type="checkbox"/> Service and Technology Provider          |
| <input type="checkbox"/> Tier 1 Industry Partner – Constructor | <input type="checkbox"/> Other                                    |
| <input type="checkbox"/> Tier 2 Industry Partner – Constructor |   |

# Appendix

**Q5 – In your experience what do you believe is the key barrier to innovation in the roads sector (select 1):**

- |   |  |
|---|--|
| <input type="checkbox"/> Tender process   | <input type="checkbox"/> Risk aversion of leadership   |
| <input type="checkbox"/> Onsite delivery processes  | <input type="checkbox"/> Lack of resources on projects   |
| <input type="checkbox"/> Design specifications  | <input type="checkbox"/> Focus on short term results   |
| <input type="checkbox"/> Knowledge sharing and collaboration between projects and jurisdictions | <input type="checkbox"/> Barriers for new ideas to go from research phase to on project implementation |
| <input type="checkbox"/> Lack of skills in workforce  | <input type="checkbox"/> Other   |
| <input type="checkbox"/> Location (eg. Regional vs. Capital Cities)                             |  |

**Q6 – Why do you believe this is the key barrier?**

**Q7 – In your experienced what mechanisms and processes in the development and delivery phase of projects have encouraged innovation and productivity? (pick 1 or more)**

- |   |  |
|---|--|
| <input type="checkbox"/> Grant and funding focused on innovation programs                           | <input type="checkbox"/> Hiring diverse skillsets in project teams                       |
| <input type="checkbox"/> Leadership encouraging innovation directly on projects                     | <input type="checkbox"/> Training and upskilling existing teams                          |
| <input type="checkbox"/> Tender specifications targeting innovation                                 | <input type="checkbox"/> Resources, time and space specifically allocated for innovation |
| <input type="checkbox"/> Partnering opportunities with universities, start-ups, other organisations | <input type="checkbox"/> Pathways to trial or pilot innovations on projects              |
| <input type="checkbox"/> Sharing ideas and collaborating across projects and jurisdictions          | <input type="checkbox"/> Other   |

**Q8 – Please elaborate further on how these approaches encouraged innovation:**

**Q9 – Can you name a case study or project where these approaches best encourage innovation? Feel free to include a link if applicable.**

# Appendix

**Q10 – If you had to pick one area to focus on to encourage innovative processes and mechanisms what would it be?**

**Q11 – Based on Roads Australia’s Policy, which of their pillars do you think should be the focus to increase productivity through innovation in the roads sector? (pick 1 only):**

- Communication of a visible pipeline
- Procurement Reform
- Digital Uptake
- Workforce Reform (ie. Diversity and Inclusion, attracting and retaining talent)

**Q12 – How would you like to see innovation processes, mechanisms and case studies shared across jurisdictions:**

- Roads Australia Newsletter – feature articles
- Roads Australia Website Portal – database in which members can contribute too
- Lesson and Knowledge Sharing webinars
- Social media posts and articles eg. LinkedIn
- Other

**Q13 – Are there any other comments, key case studies or links you would like to share with regards to encouraging innovation in the roads sector?:**

**Q14 – Would you like to be interviewed to discuss your answers in more detail:**

- Yes
- No

**Q15 – If yes, please provide your contact details below:**

Name	<input type="text"/>	Email	<input type="text"/>
Organisation	<input type="text"/>	Phone	<input type="text"/>
Role	<input type="text"/>		



**Innovation: An Emerging  
Leaders' Perspective  
Outcomes report**

6/437 St Kilda Road  
Melbourne VIC 3004

**P** +61 3 9821 5255

**E** [admin@roads.org.au](mailto:admin@roads.org.au)

 [roads-australia](#)

 [@RoadsAustralia](#)

[roads.org.au](http://roads.org.au)