

Gas Infrastructure Research Australia

One Year Of GIRA: Reflections, Achievements & Next Steps

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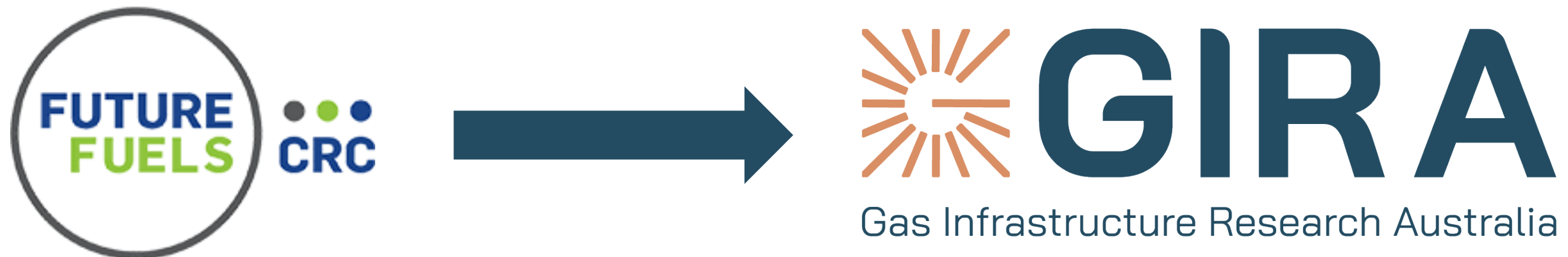
Overview of Presentation

- 1. What is GIRA?***
- 2. Why do we exist?***
- 3. Highlights and milestones from GIRA's first year***
- 4. Research program development and 3-year plan***
- 5. Upcoming events and engagement opportunities***

What (and who) is GIRA?

A new, enduring, industry-led research body (successor of Future Fuels CRC)

➤ *“Innovative research on the role of gas infrastructure in the energy transition”*



- Initiated by APGA and ENA in 2025
- Members include gas transmission + distribution asset owners/operators, consultants, contractors and regulators
- Initial research budget of ~\$2M p.a.



Why does GIRA exist?

Transition to a net-zero future accelerates the need for gas infrastructure research

- Unique challenges for gas infrastructure → benefit in a coordinated and collaborative approach to address common challenges
- Achieve industry-wide consistency (e.g. via guidelines and standards)
- Bring together different parts of the industry (e.g. networks and transmission, operators, contractors, consultants and regulators)
- Offer training and education to support development of people



National Renewable Gas Policy Consultation Paper

August 2026

**energy and
climate change**
ministerial council



One Year of GIRA: Highlights & Milestones

- 1. GIRA events & member buy-in***
- 2. Engagement with external parties***
- 3. Completion of first projects***

➤ **Members Research Planning Workshop**

- Held in August 2025 to kick-start GIRA program
- Led to formation of **3 x Industry Working Groups**
- WGs drive priorities and direction of research



➤ **Inaugural GIRA Research Seminar:**

- ~80 attendees in person (+ several online)
- Showcased early project outcomes + brainstorm session for future research

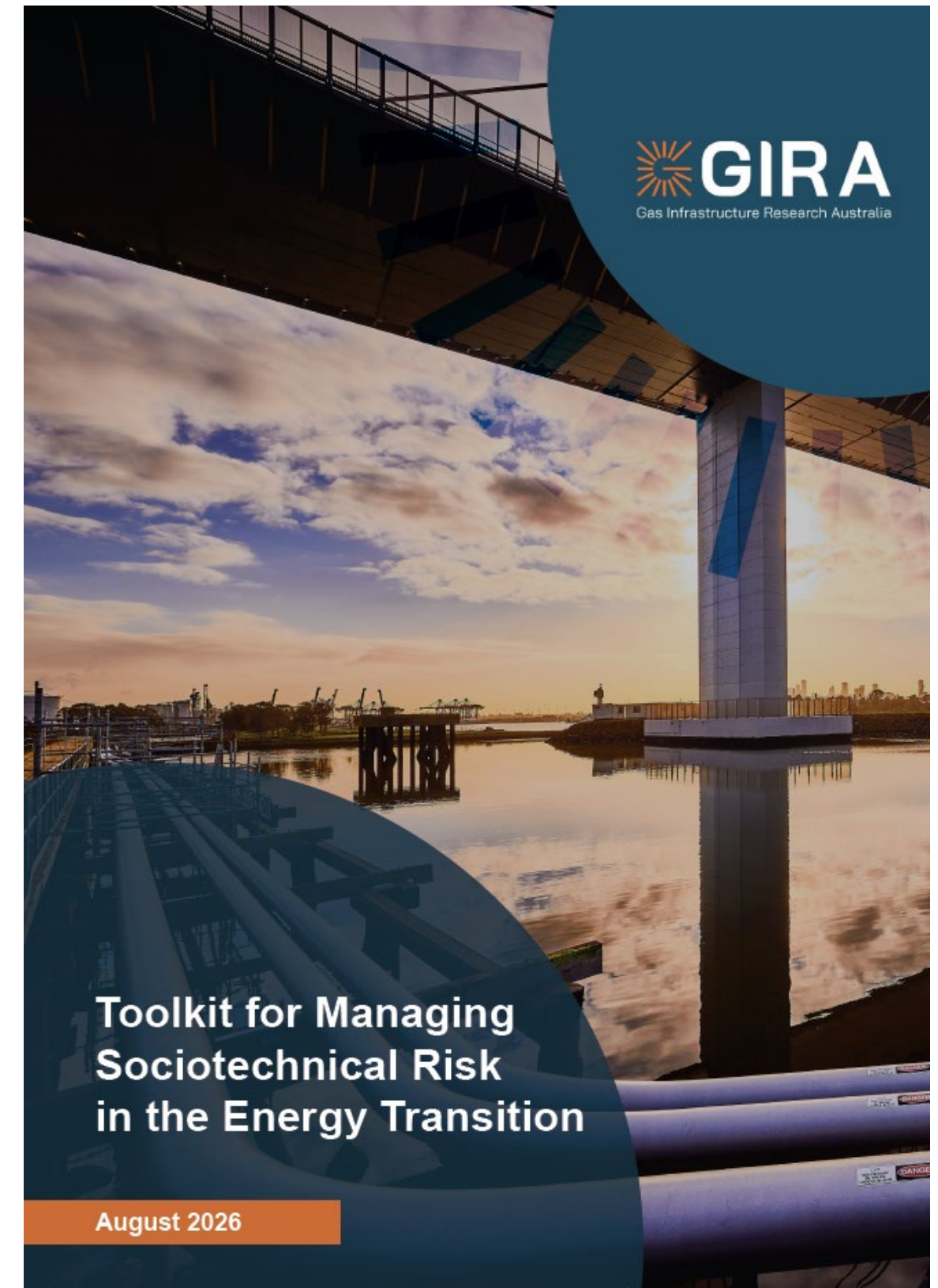
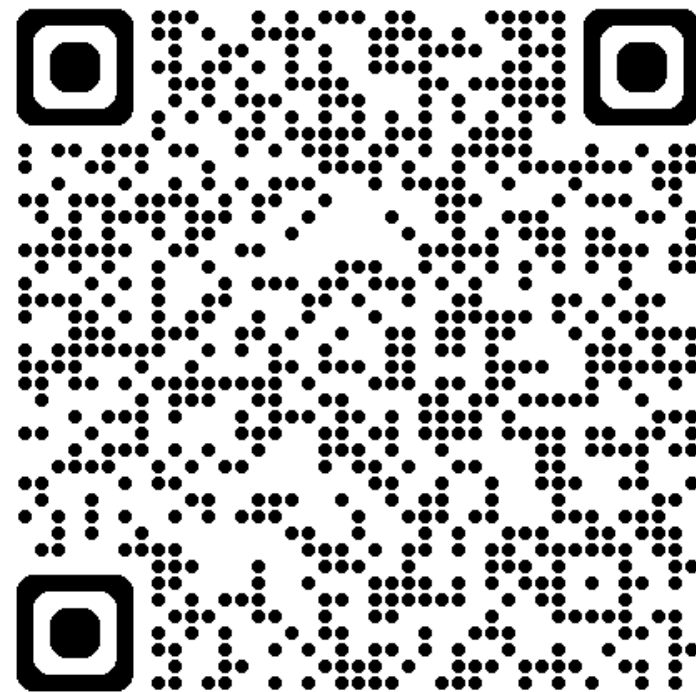
➤ **APGA Women in Pipelines Forum**

- Event held at UoW to showcase role of research and opportunities to get involved (pictured)

One Year of GIRA: Completion of Projects (1)

- ***P3-25-01: Sociotechnical risk in the energy transition (Stage 2) – RMIT***
 - Develops theory into a practical output → toolkit for identifying and managing project risks
 - Draws on literature + interviews with industry professionals
 - 25 interviews spanning operators, consultants, contractors and technical regulators
 - **Web link + QR code:**

<https://gira.org.au/research/p3-25-01-sociotechnical-risk-in-the-energy-transition-stage-2>



➤ ***P2-26-01: Arc burns removal and repair (Literature Review) – UoW***

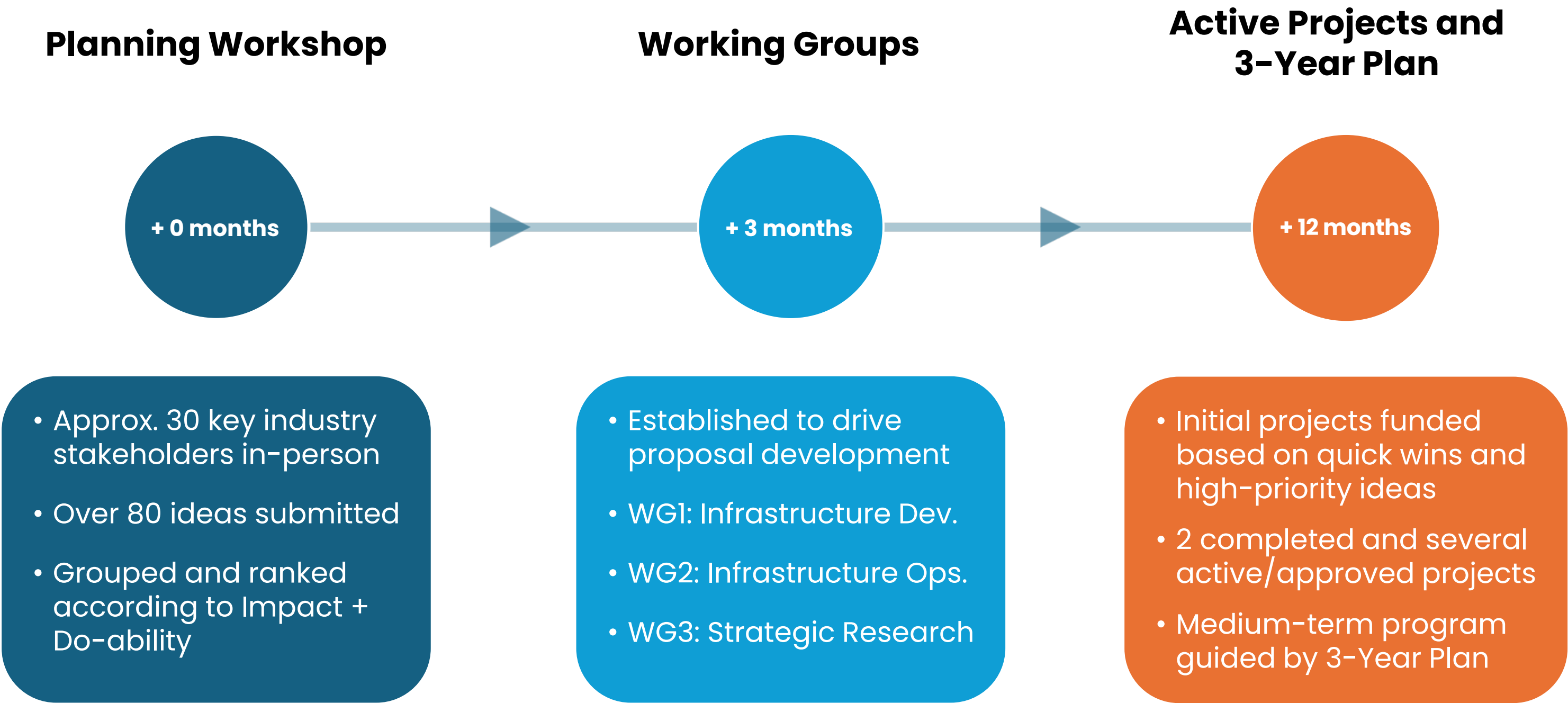
- Value is improved safety outcomes while reducing unnecessary repair costs
- Draft recommendations made for AS 2885.3 (e.g. crack-free arc burns below a certain size may not require repair)
- Proposed future experimental and modelling research to confirm recommendations

Arc burn examples:



Research Program Development

- 1. Overview and 3-Year Plan***
- 2. Working Groups and Research Areas***
- 3. Active and Approved Projects***



Working Groups (WGs) and Research Areas

WG1 Infrastructure Development	Hydrogen embrittlement
	Fracture
	Welds
	Plastics and elastomers
	Storage pipelines
	Construction
	Consequence

WG2 Infrastructure Operations	Pipeline integrity (materials)
	Geohazards
	Pipeline integrity (corrosion)
	Decommissioning
	Third-party interference
	Risk assessment and processes
	Environment, emissions and facilities

WG3 Strategic Research	Renewable gas scale-up
	Energy system modelling
	Policy and planning
	Community and society
	Emerging technologies

Cross-WG Themes:

1. Future pipeline fuels and fluids
2. Safety and risk assessment
3. Management of ageing assets
4. Responding to change and uncertainty
5. Translating to practical outputs (models, tools, standards)

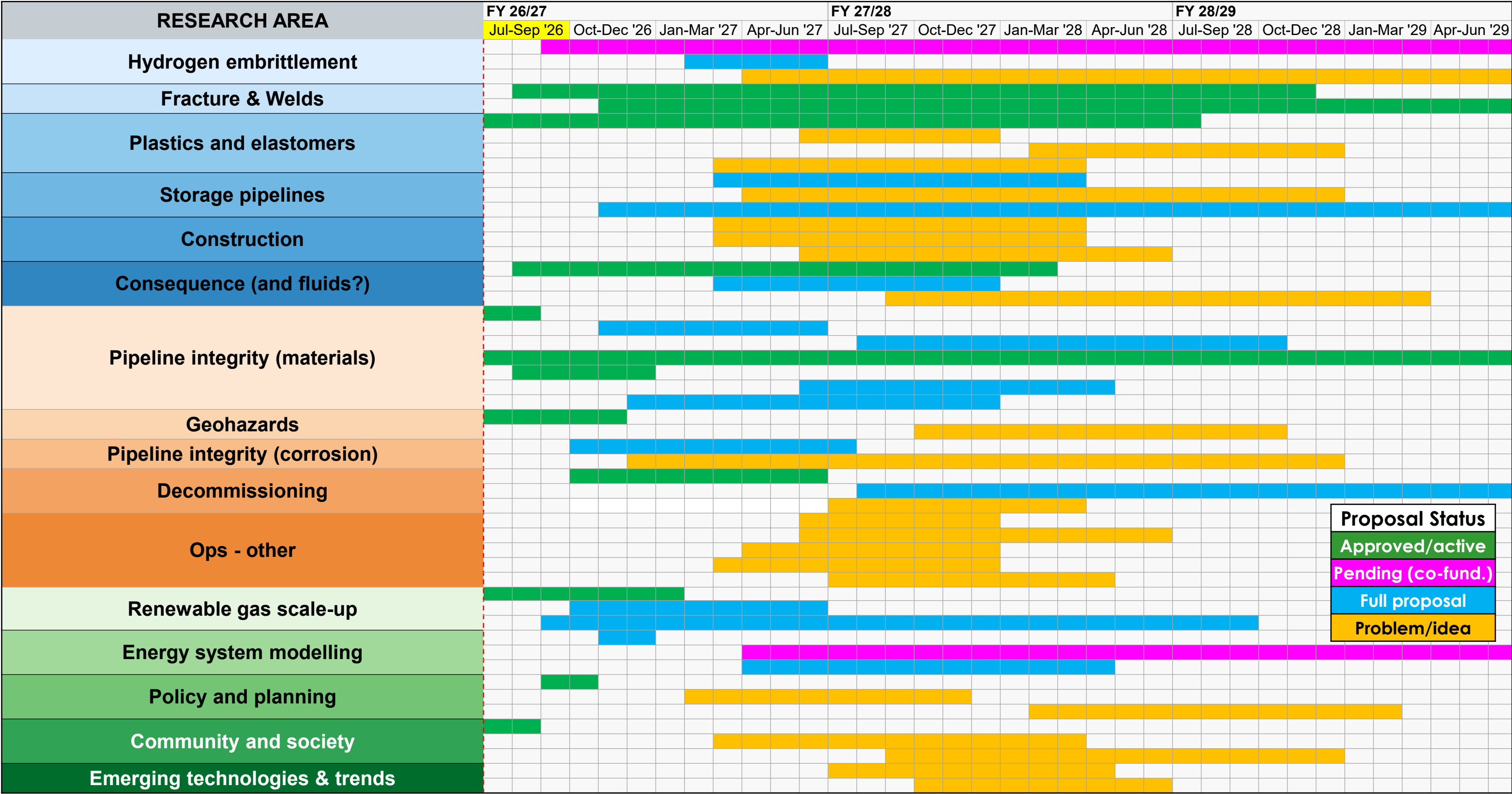


GIRA-Funded Projects – Active | Approved | Complete



Project #	Working Group	Short Title	Research Provider	Start Date	End Date	Status
P1-25-01	Development (WG1)	<i>Hydrogen test beds (plastic pipes)</i>	Deakin University	25/11/2025	25/07/2028	Active (on schedule)
P1-26-01	Development (WG1)	<i>Girth weld strain capacity assessment</i>	University of Wollongong	1/09/2026	1/09/2029	Not started
P1-26-02	Development (WG1)	<i>Gas meters dispersion modelling</i>	Adelaide University	1/09/2026	1/03/2028	Not started
P1-26-03 (RP3.10-03)	Development (WG1)	<i>Ductile damage-based fracture initiation model</i>	University of Wollongong	1/02/2022	1/11/2028	Active (FFCRC PhD)
P2-26-01	Operations (WG2)	<i>Arc Burns Risk Assessment (Literature Review)</i>	University of Wollongong	1/05/2026	1/09/2026	Complete
P2-26-02	Operations (WG2)	<i>Inclined cracking in legacy gas pipelines</i>	Curtin University	12/08/2026	31/01/2027	Active (on schedule)
P2-26-03	Operations (WG2)	<i>Benchmarking AS2885 against international geohazards research & standards</i>	Worley Consulting	1/06/2026	1/11/2026	Active (on schedule)
P2-26-04	Operations (WG2)	<i>PhD: Machine-Learning-based failure prediction in plastic pipes</i>	Deakin University	1/06/2026	1/01/2030	Not started
P2-26-05	Operations (WG2)	<i>Pipeline end-of-life management scoping study (decommissioning)</i>	TBC	1/10/2026	TBC	Not started
P3-25-01	Strategic (WG3)	<i>Sociotechnical risk in the energy transition</i>	RMIT	1/12/2025	19/07/2026	Complete
P3-25-02	Strategic (WG3)	<i>Maximising opportunities for biomethane injection (mapping tools)</i>	Adelaide University	1/02/2026	1/02/2027	Active (on schedule)
P3-25-03	Strategic (WG3)	<i>What does “hard to abate” mean in practice? (Stage 1)</i>	GPA Engineering	04/09/2026	18/09/2027	Not started

3-Year Plan: Timeline View



1. **Research Development Forum | Wed 04 November (Online)**

- Presentation of detailed 3-Year Plan
- Opportunity for members to review priorities and overall direction

2. **Corrosion Research and Standards Workshop | Feb 2027 (Deakin Uni)**

- Bringing together researchers, industry experts, operators, regulators and standards committee members

3. **Joint Technical Meeting (JTM) on Pipeline Research | 2–6 May 2027 (Sydney)**

- Bi-annual event by APGA, PRCI and EPRG – GIRA is the Host Partner sponsor
- Attendance available to members of APGA-RSC
- Call for Abstracts is open – more info on JTM website: <https://conferenceco-25th-joint-technical-meeting-2027.eventsairsite.com/>



Key Messages

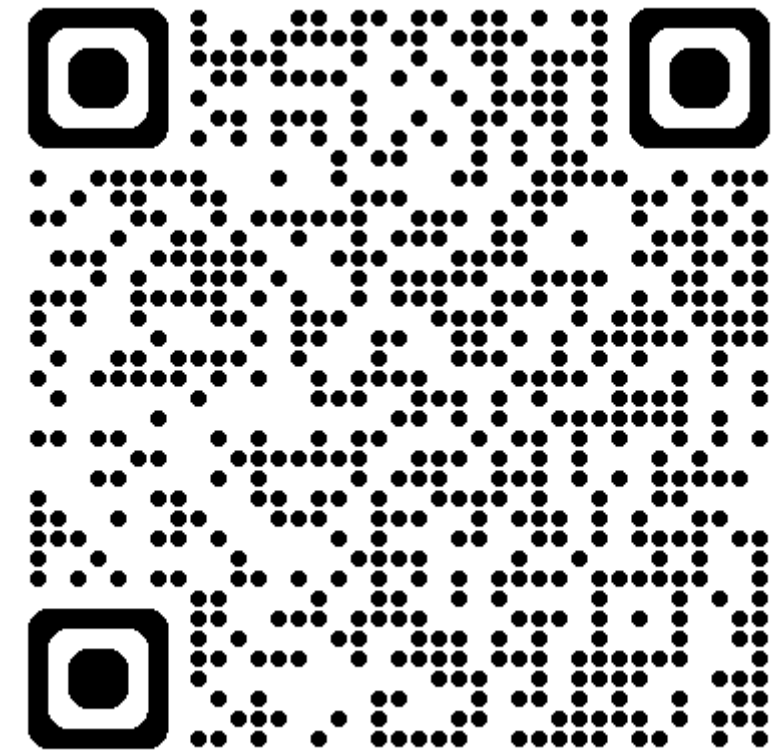
- Delivering on short-term priorities
- Refining medium- to long-term program
- Maximising impact through events & engagement

Next Steps & Call to Action

- GIRA's value is built on industry buy-in and feedback
- Please get in touch with us with any questions/ideas!
- Recently appointed Dr. Dennis Van Puyvelde as Business Development Manager
 - E: Dennis.Vanpuyvelde@gira.org.au
 - Please feel free to flood Dennis's inbox with membership queries!

GIRA Website

Research projects + archive section with members login recently launched



<https://gira.org.au/>

Thank You