FUTURE FREIGHT
COOPERATIVE RESEARCH CENTRE

Future Freight CRC

Efficient, clean and resilient freight for Australia

UPDATE 31st July 2025


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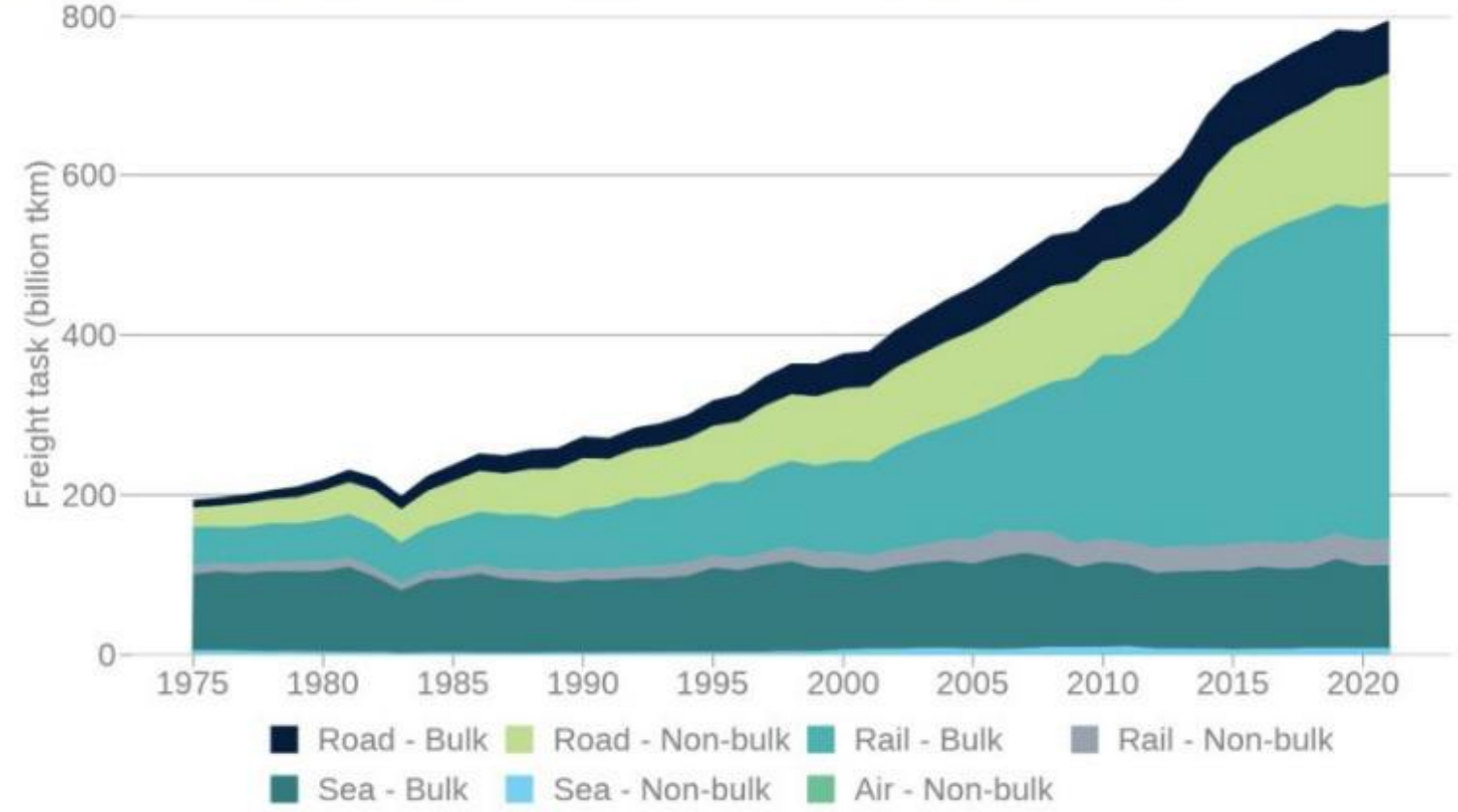
Our chance to significantly boost the transition to cleaner, safer more efficient Freight in Australia

The Motivation

Contribution of Freight to GDP 8.6%

Figure 3: Australian freight task, by mode and bulk/non-bulk, 1974-75 – 2020-21



Source: BITRE estimates.

77%

Projected growth in road freight between 2020 and 2050

Higher efficiency, lower costs

Induced Freight demand

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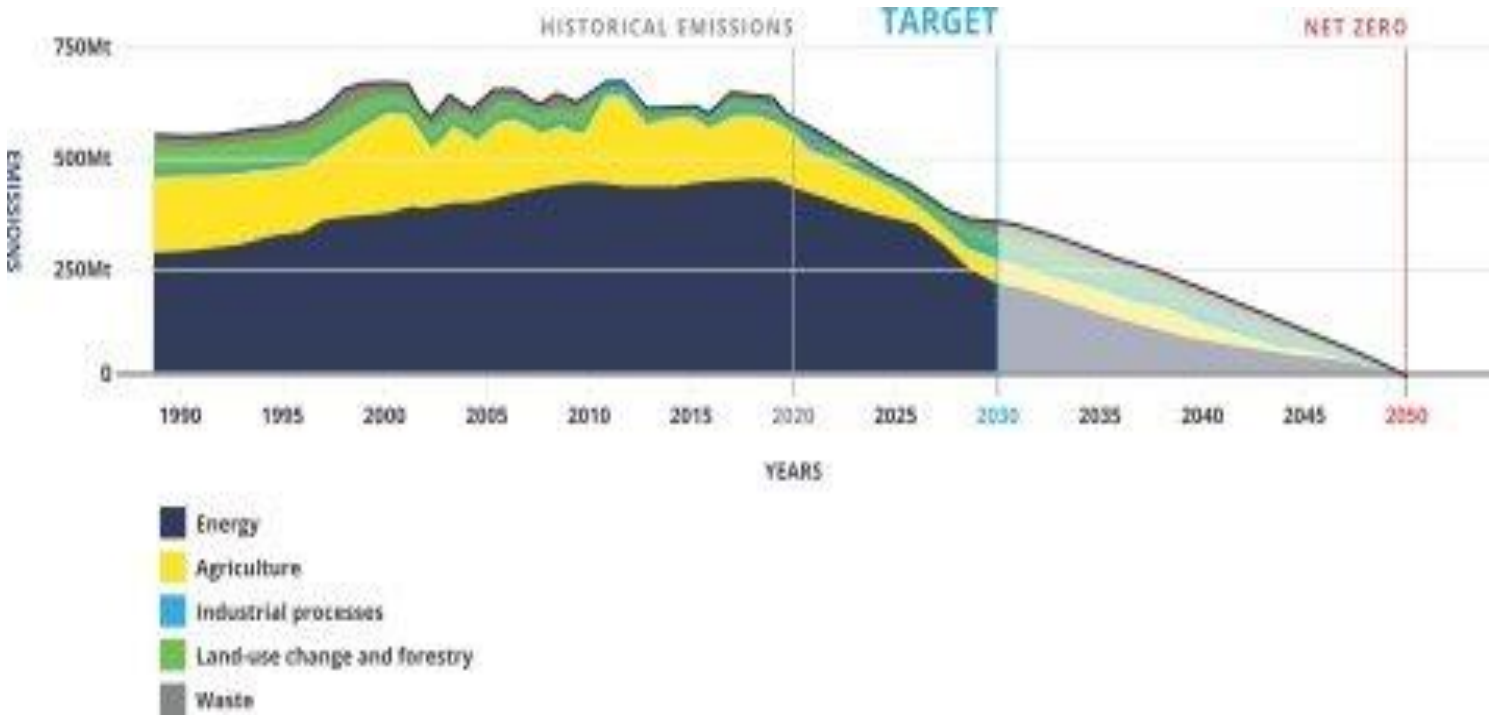
Meeting emissions targets

Australia's climate ambitions require a multi-modal response to achieve the 2050 target. Transport has a long way to go to address emissions – freight in particular.



The **2030 projections** for the transport sector leave an enormous challenge for the 2030s and 2040s.

Emissions will need to fall by **5Mt per year to reach net zero by 2050** – almost as sharp as the effect of the Covid-19 pandemic each year.

Climate Watch Data, 2023

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We have unique challenges and requirements

Climate & weather

Geography & distance

Vehicle fleet

Infrastructure

Sector challenges and opportunities

Successful freight is essential for the Australian economy. As freight demand and the need to decarbonise increase, there is growing pressure on the sector to evolve. This is both a challenge and opportunity to:

- Increase freight network efficiency, including through higher levels of integration
- Improve network and supply chain resilience
- Provide a pathway to achieving emissions goals
- Drive innovation in the sector
- Develop skills and knowledge-base

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What is a CRC?

The Cooperative Research Centres (CRC) Program is an Australian Government initiative that was established in 1990 and funds industry-led collaborations between industry, researchers and end users.

The CRC Program links researchers with industry and government with a focus towards research application.

CRC's are funded for 7-10 years by participating and winning a competitive bid process.

Why a Future Freight CRC?

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Future Freight Cooperative Research Centre (CRC) is a national R&D centre that works with industry, government and research partners to deliver high impact collaborative projects that boost the sector.

The Centre will generate evidence-based knowledge and innovative solutions that support Australian independence in the distribution of goods, accelerate decarbonisation and enhance efficiency of multimodal movement of goods by road, rail, sea and air.

Advisory Committee Update: Heather Bone-TGE Simon Roycroft- Refuelling Solutions

An industry-focused model: partner view

Mars Pet Nutrition- Oliver Raschke

Masoud Abshar
Managing Director
Magellan

magellan power

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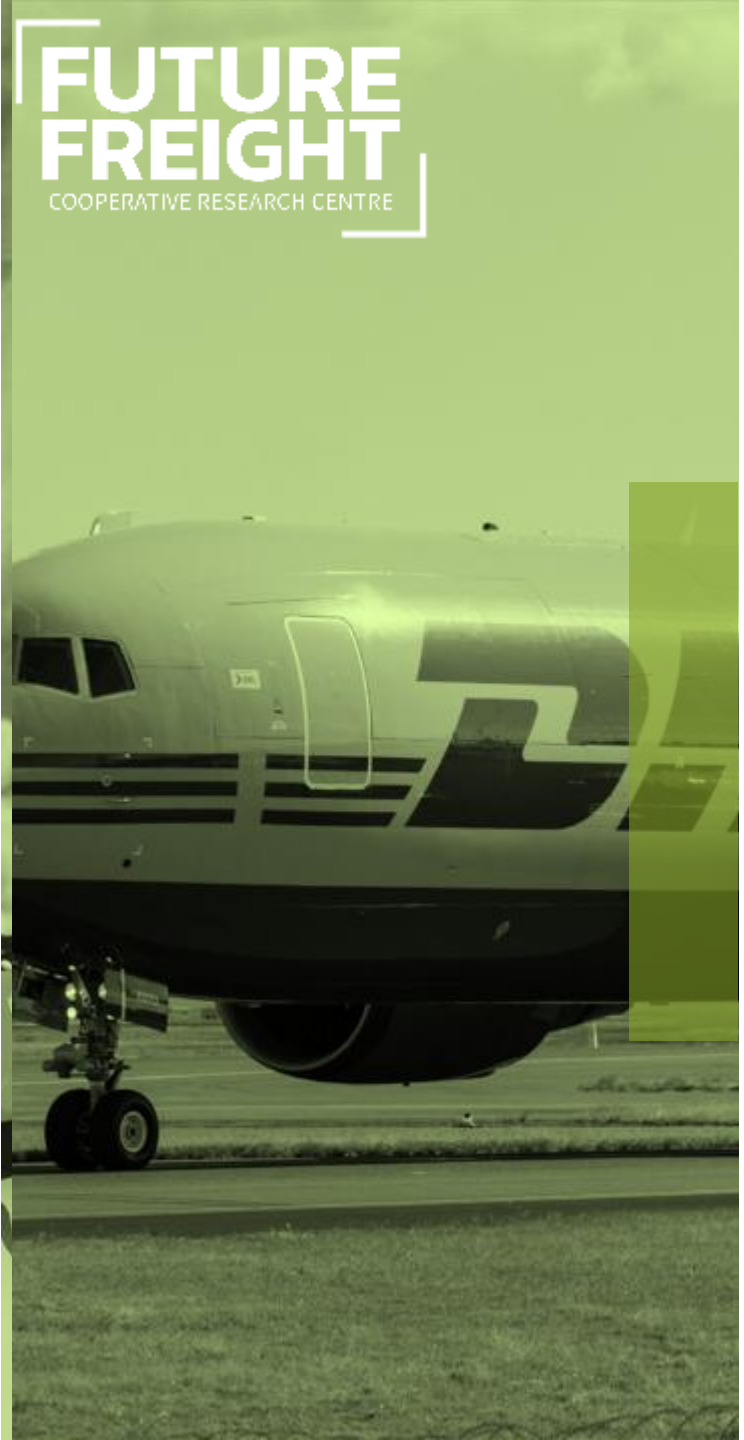

Challenges/opportunities we are hearing from partners:

- **Optimising the movement of goods** – supply chain efficiency from production to processing, distribution and return to base.
- **Test and trial** new energy sources.
- **The power of a freight customer –** encouraging change in freight operators.
- **Distribution experimentation** – multimodal/last mile- test and trial, freight as a service.
- **Business continuity –** what do you do when it floods/ pandemic/ adverse events?
- **Obligations around compliance**, ESG and emissions reporting requirements.
- How do we help the sector **achieve 50% reduction of emissions by 2030**?
- **Partners** who would be receptive to collaborating to solve decarbonisation issues.
- **Ecosystem** to support outcomes.

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Research Program Update- Professor Hadi Ghaderi

Research Approach

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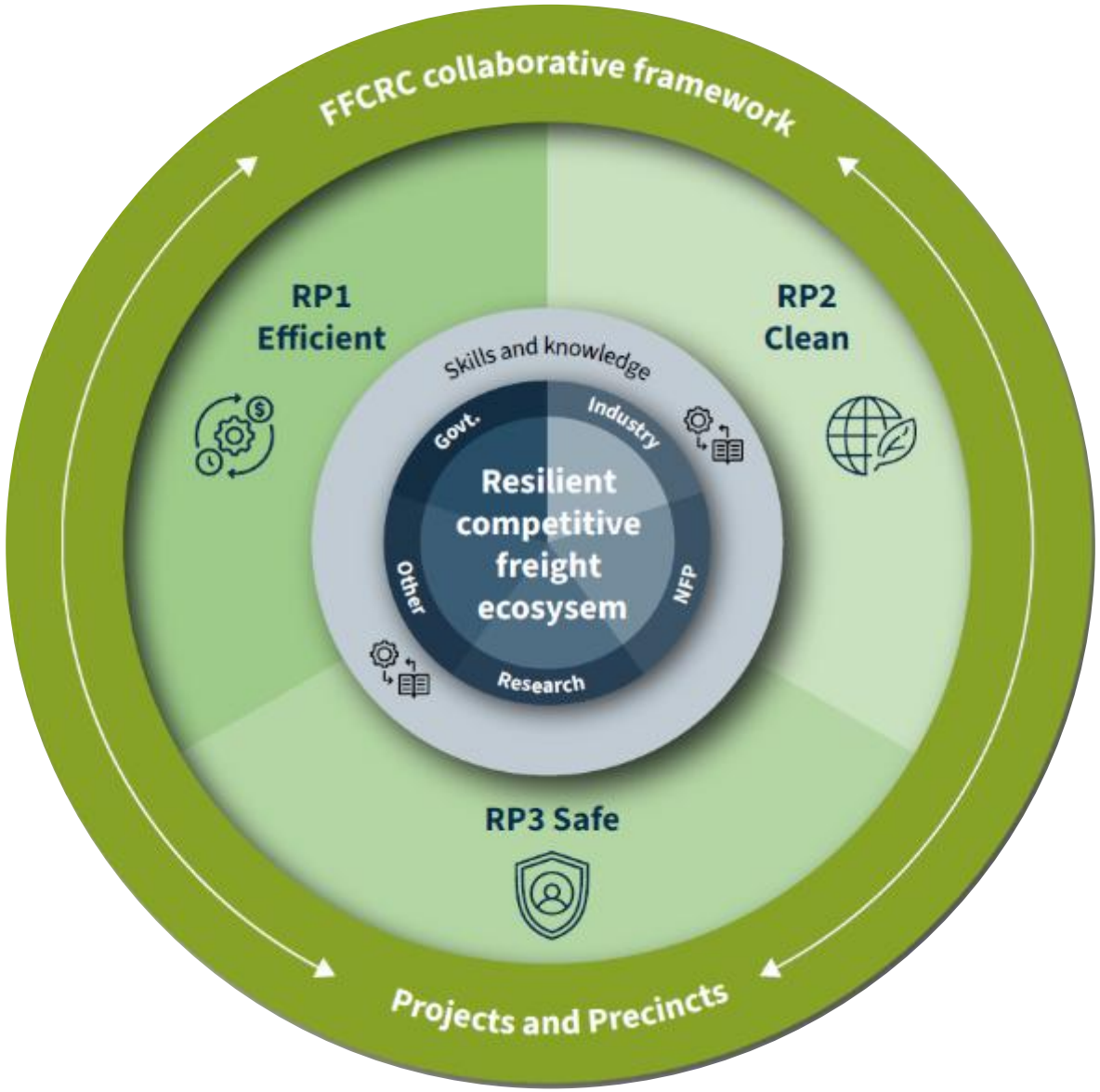
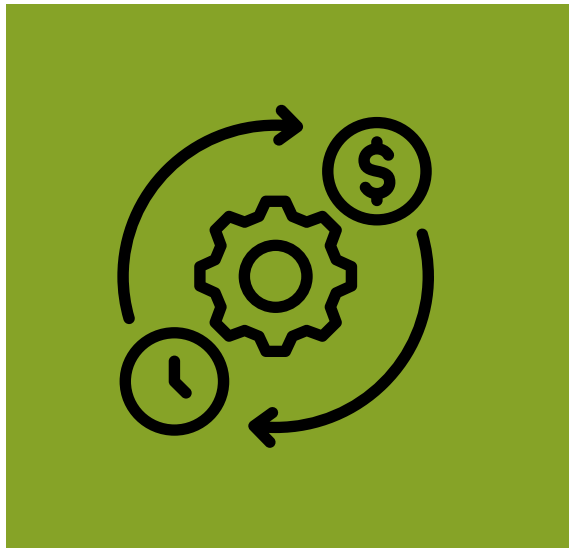


R&D Program 1 – Efficient



Efficient freight underpins the success of all our industries and our economy. Better and advanced use of data will drive efficiency gains that create reliable responsive networks for competitive businesses.

- Develop smart logistics technologies, optimisation and data analytics tools
- Design innovative freight operating models
- Develop and trial advanced Freight Intelligent transport Systems (ITS)
- Develop strategy and policy for mode shift
- Improve asset utilisation and infrastructure access
- Develop nationally recognised standards and framework
- Improve data sharing and access

R&D Program 2 – Clean

The movement of goods generates a large amount of emissions. We need to rapidly progress development of and roll out technology to mitigate the impact this is having. It is expensive, but by cooperating we can introduce and scale solutions in more manageable ways.

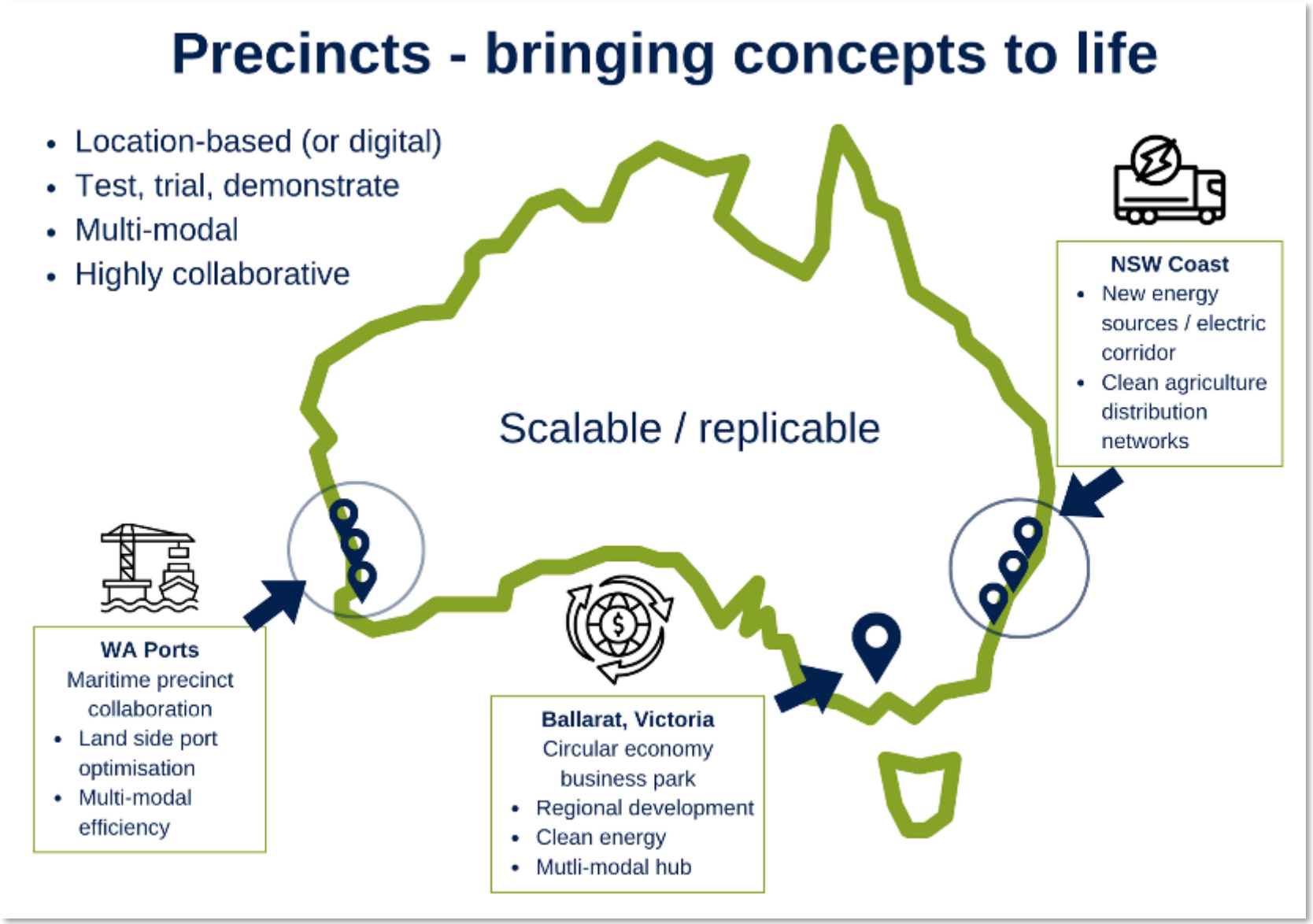
- Design and develop low- and zero-emission freight technologies
- Advance uptake of alternative fuels & new energy sources
- Undertake real-world trials and demonstrations with knowledge sharing
- Co-develop policy, standards, regulatory frameworks and transition pathways
- Understand user behaviour and decision-making drivers
- Advance low-emission infrastructure modelling, design

R&D Program 3 – Safe

The Freight sector has long had a strong focus on safety. Technology and energy shifts present new and not very well understood risks that need to be handled. At the same time advanced data techniques can provide new ways of keeping people safe.

- Advance driver behaviour, safety and training
- Advance and trial technology for road, vehicle and vulnerable road user safety
- Develop safety protocols for charging and refuelling infrastructure along high-risk freight corridors and terminals
- Design modern compliance, regulatory and enforcement frameworks
- Create future ready insurance and business models

Precinct development



What's on offer

- **An industry-focussed model:** Designed and built around partner needs, with outputs focus
- **Unique program for scale and duration:** Commonwealth funding typically $40-$70m over 10 years (co-funding by industry and academia typically doubles this)
- **IP** – Affirmative to industry partners
- **Collaboration, networking, partnering:** Solving problems through applied R&D, and with the right partners
- **Access to world-class R&D resources:** to work on <u>your</u> problems (typically 'at-cost')
- **Training of future leaders:** Credentials and embedded PhDs
- **'Neutral' environment:** To co-develop technical approaches, policy and other solutions
- **R&D Tax Concessions:** Available for company co-funding

Timeline to build successful FFCRC bid – Stage 1

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1	2	3	4	5
INITIAL MEETINGS	**WORKSHOPS & CONSULTATION**	**BID DEVELOPMENT**	**FINALISE BID**	**STAGE 1 SUBMIT**
Apr - Nov 2024	**Nov 24 - May 2025**	**Apr - Sep 2025**	**Oct - Dec 2025**	**Feb / Mar 2026**
Initial consultation with potential partners to gauge level of interest.	Attend workshops, work with FFCRC to refine scope. Build CRC awareness within your organisation.	Continue to engage with FFCRC, secure internal agreement to participate. Contribute to development of R&D program, education program and outcomes	Final inputs to research and education program development **Finalise your organisation's commitment.**	Be available to respond to bid related questions.

Ongoing consultation with partners

Timeline to build successful FFCRC bid – Stage 2

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1	2	3	4	5
STAGE 2 ADVICE	STAGE 2 BID	STAGE 2 SUBMIT	INTERVIEW	OUTCOME DECISION
June 2026	Mar - Aug 2026	Aug 2026	Sep - Oct 2026	Dec 2026 / early 2027
Advice received about shortlisting. Assist with final bid inputs as required.	Final workshops to confirm R&D program, inputs to impact modelling, and finalise CRC outputs.	Final paperwork submitted.	Interview preparation and attendance (as required).	Application outcomes advised. CRC can commence setup and operations following advice from Minister (typically early 2027).

What's next

1

Partner Packs will be sent over the next few days.
30 September deadline for partner confirmation.

2

Partner engagement is ongoing around the country – Perth and Wollongong in August, Canberra and Wagga in September.

3

R&D program development will ramp up in Aug-Dec. Get involved.

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Thank you for attending

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Additional slides

Matched funding for your projects

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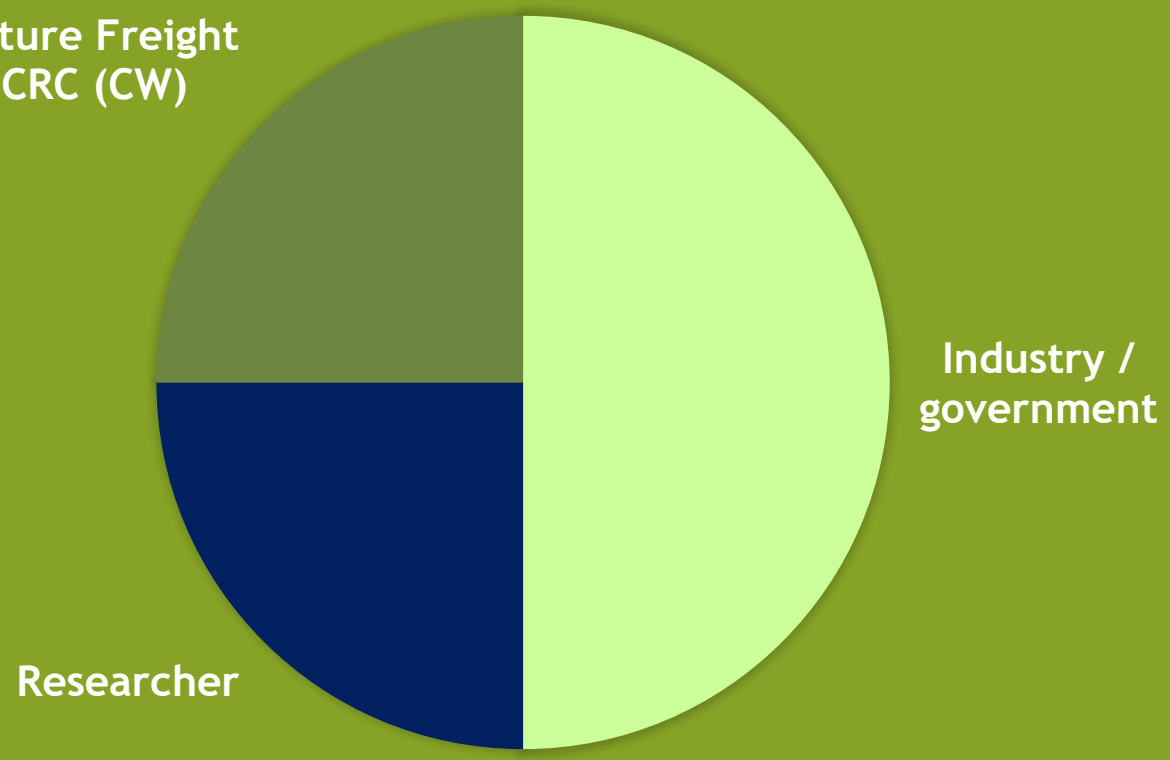
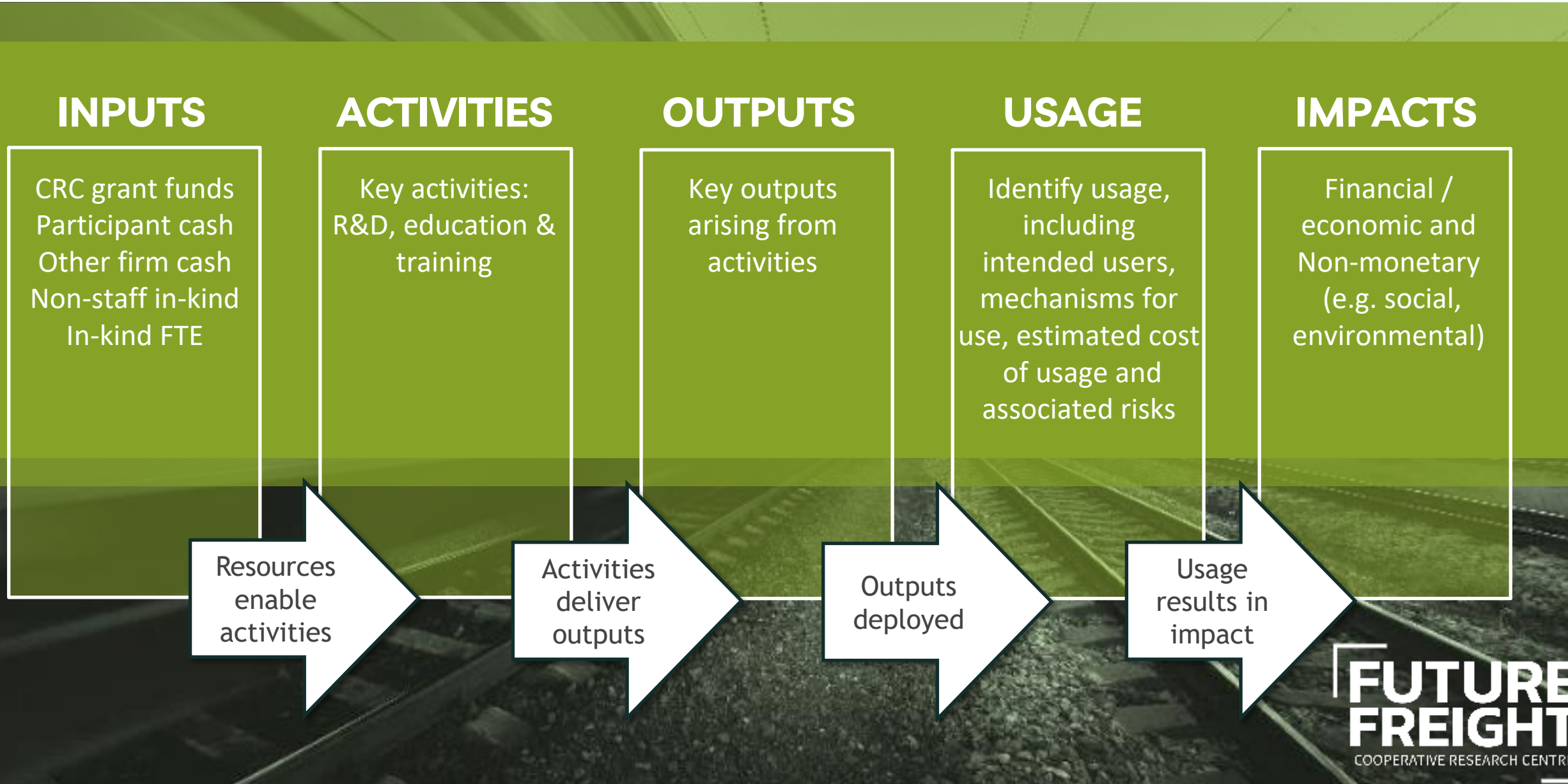
TYPICAL PROJECT FUNDING ARRANGEMENT



Reduce cost and risk of activities such as:

- Trials and pilots
- Tech development and testing
- Sustainability projects
- Roadmaps and strategies
- **Your ideas?**

The ‘Commonwealth process’



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