

Food and Beverage Small Medium Enterprise Packaging & Machinery Solution Centre

(F&B SME P&M Solution Centre)

The Food and Beverage (F&B) Small and Medium Enterprise (SME) Packaging and Machinery (P&M) Solution Centre assists SMEs to deploy commercial solutions that embody ESG dimensions aligned to national sustainable packaging strategies to reduce food and packaging waste. All without increasing F&B loss and waste whilst maintaining shelf life and retaining favourable packaging attributes.

EFW CRC REDUCE Program/ Project Leader
Professor Simon Lockrey, RMIT University

Project Participants
APPMA, Tetra Pak, AIP, and RMIT University

Support Partners
APCO and AFGC

Locations RMIT University and various locations across Australia at labs conducting research projects

OVERVIEW

Australia's food and beverage (F&B) manufacturers continue to be aligned towards implementing sustainable packaging innovations using 100% reusable, recyclable or compostable solutions. Despite policy implementation delays, actions to this end continue. Including phasing out problematic and unnecessary single-use plastic packaging. A major risk exists that as F&B producers move to new packaging formats, they will lose shelf life, create undesirable product attributes, and in the process increase food loss and waste (FLW).

The End Food Waste Cooperative Research Centre (EFW CRC) solution to address this risk is to create a Food and Beverage (F&B) Small and Medium Enterprise (SME) Packaging and Machinery (P&M) Solution Centre (modelled on the successful FIAL/FFW CRC Food Innovation SME Solution Centre), aimed to assist SME firms to transition to sustainable packaging through implementation actions from an ongoing requirement to meet future circular systems without increasing F&B waste in the process.



F&B SME P&M SOLUTION CENTRE VALUE PROPOSITION

We will undertake co-funded research with SMEs to assess product attributes (i.e. flavour, integrity, shelf life, etc) provided by new P&M formats to ensure firms are making the right choices on such P&M transitions. Currently, F&B manufacturers seek advice from current suppliers or peers, which may not offer comprehensive or independent solutions to given problems or proposed packaging and processing changes. Our Centre looks to fill that gap, as a national 'source of truth' for SMEs looking to innovate in packaging/ material and machinery/ processing for nexus commercial/ sustainability drivers.

This will be achieved by providing 'solutions focused' financial support to successful applicant firms. Firstly, the Centre will be a resource to seek advice as to existing/ available packaging, processing and machinery solutions that are available so the relevant SMEs can be directed to those sources if suitable. The Centre will also fund (dollar for dollar) short term research and innovation outcomes delivered by researchers in the CRC. Researchers will draw on emerging novel and innovative existing packaging/ material and machinery/ processing technologies, which will deliver around a mix of national packaging sustainability requirements, high-performance packaging attributes, processing/ machinery change, whilst reducing food waste problems.

In doing so, we will implement the recently released Australasian Institute of Packaging (AIP) led Save Food Packaging (SFP) Criteria (see Francis et al. 2023) and, as per the Australian Packaging and Processing Machinery Association (APPMA) CRC project on opportunities for packaging/processing/ machinery sector/s (see Leenders et al., 2023), consider the latest sustainable P&M techniques provided by industry leaders from APPMA's members and AIP's Education Team and pool of packaging experts, and beyond.

APPROACH

Each project will have a specific methodology depending on the food, packaging, machinery, and processing technologies involved, however they must align to the core aims of the Centre to assist industry to transition to;

- to help drive the ongoing national circular packaging innovations momentum;
- new processing; or
- new machinery; and aim to
- reduce F&B FLW, or at least not increase F&B FLW, in the process.

Projects need to determine this last point specifically. Projects will also need to be delivered within 12 months.

To assist in delivering the key aims of the Centre and CRC milestones, a streamlined life cycle assessment and/ or mass cost flow analysis will need to be conducted for all funded projects, including on comparison FLW/ packaging-processing-machinery benefits/ impacts (to be budgeted for/ within each project). The AIP and CRC will draw on their relationship with Empauer for low cost LCAs and using DIRECT for mass/ cost flow analysis (or 'Material Flow Cost Accounting', MFCA) to this end.

TECHNOLOGY PARTNERS/ POOL AND RESEARCH LABS

Various paid experts will assist Centre staff, a technical pool sourced from AIP, APPMA and wider industry networks, in 'holding the SME's hand' at the start – such determining project options, visiting facilities, and assessing project needs, where appropriate, before the project is commenced.

Also, emerging novel and innovative existing packaging/ material and machinery/ processing technologies from technical partners from across the networks of the AIP, APPMA, Tetra Pak and universities will be considered, as well as through the networks of supportive partners APCO and AFGC.

Research labs from across our 11 research providers in the EFW CRC (i.e RMIT, QUT, UQ, SARDI, etc) will run and deliver the research, with packaging/ processing/ machinery partners (from a technology partner network).

OUT OF SCOPE

Large capital expenditure is not covered by the project funding. Piloting and testing on equipment, such as hiring equipment, can be funded. For further funding scope, see EFW CRC funding rules and investment framework.

APPLICANT FIRMS CRITERIA FOR PARTICIPATION

- Hold an Australian based ABN and/or CAN
- Be a Small Medium Enterprise (SME), as per the national definition.
- Provide at least one dollar cash investment for every dollar provided by the CRC for approved projects. That does not limit CRC unmatched projects also running through the Centre.

EOI PROCESS

Projects to be funded will be selected through an EOI process, which will be a rolling call via the EFW CRC.

FURTHER INFORMATION

Please contact Ruby Chan at ruby.chan@rmit.edu.au.



REFERENCES

Francis, C., Kelton, N., Lowenstern, B., Ryder, M., Lockrey, S., and Verghese, K. (2023) Save Food Packaging Design Criteria and Guidelines, End Food Waste Cooperative Research Centre, Adelaide. Australia.

Leenders, M., Verghese, K., Hill, A., Langley, S., Young, G., Coy, E., Lodge, S. And Mulherin, P. (2023) The opportunities for Australia's packaging and processing machinery sector to tackle food waste, 1.2.3 – Final Project Report, Fight Food Waste Cooperative Research Centre, Adelaide. Australia.

APCO (2024) Australia's 2025 National Packaging Targets - APCO, accessed 6/8/2024, APCO, Sydney.