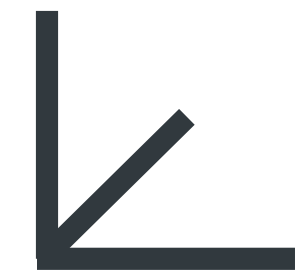




Date Labelling + Storage Advice

Professor Lukas Parker
Professor Simon Lockrey



Australia's
nationwide
effort:
To reduce
household
food waste



Australian households waste nearly
2.5 million tonnes of food per year resulting in:

92%



Food waste going
to **landfill**

1/3

of **all** food waste
in Australia coming
from the



home

76%

of Australians
wanting to **reduce food
waste**



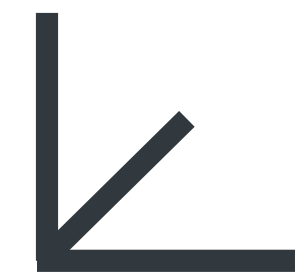
5.6m

tonnes of
CO₂ emissions



Approx
65,000 return
trips to the **moon!**



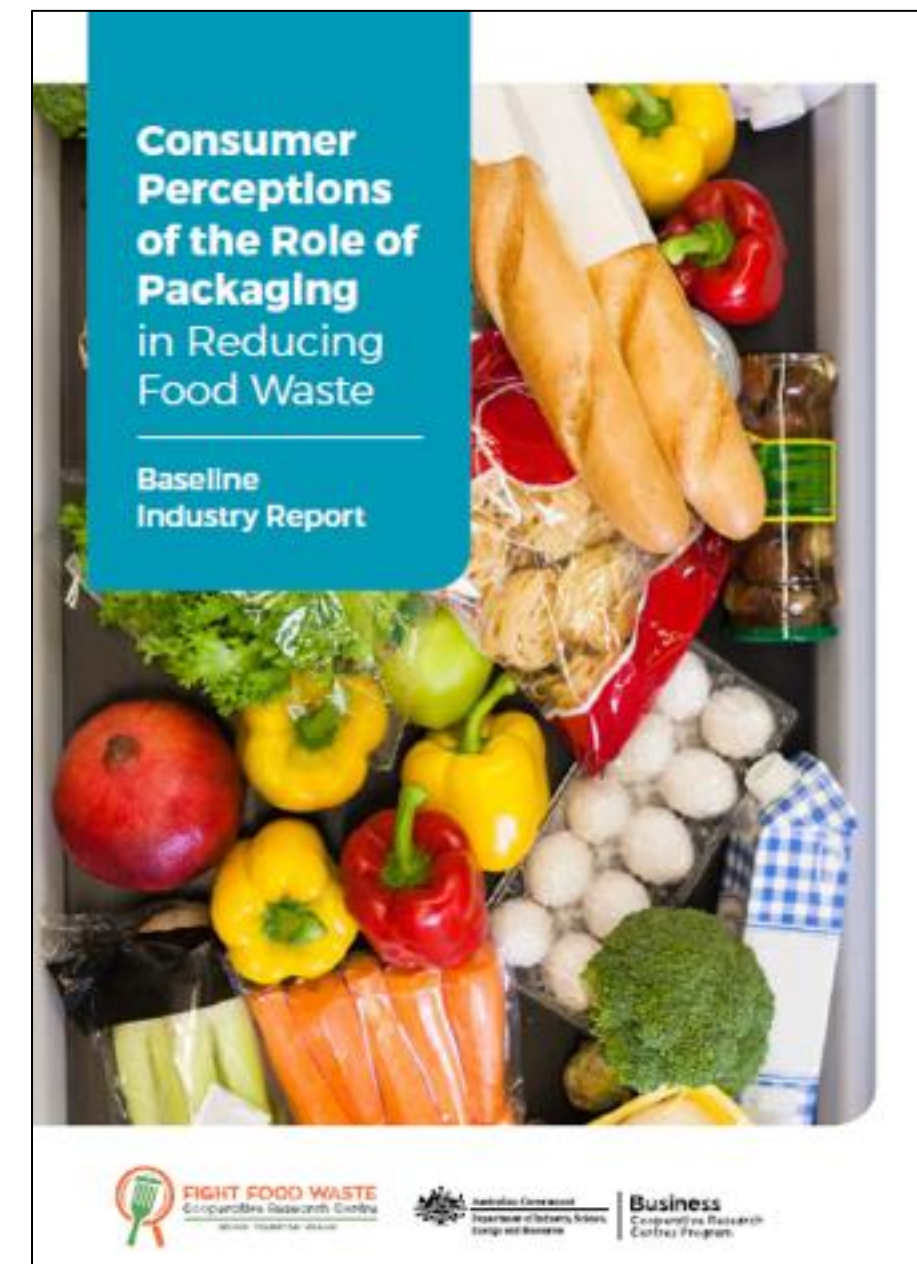


Consumer perceptions of packaging and food waste: 2020-2023

Understanding the perception and use of packaging by consumers and how this plays a role in household food waste generation.

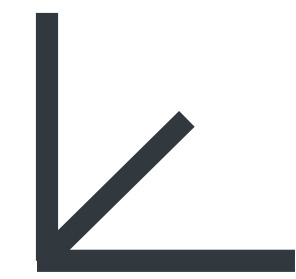
By understanding how people appreciate and use packaging and the food waste they generate, we propose improved packaging and communication design that will ultimately reduce food waste.

These results are drawn from a baseline literature review, 1000 person survey and 39 in-home interviews conducted by the RMIT researcher team on behalf of participants Sustainability Victoria and Woolworths



Reference: Brennan et al (2023)





Consumer perceptions of packaging and food waste: What we know

Storage / Freezing Practices

- Storage advice on packaging is missing, inconsistent and confusing
- Leading to refrigeration and freezing practices that lead to food waste or unsafe food.

Consumer Perceptions

- 32% of consumers felt **unable to tell if food was safe to eat**
- 32% only store food to keep it fresh **half of the time or less**
- 61% freeze their food to extend its life, **but 18% do it half the time and 20% do it rarely.**

Household Understanding

- **Australians are confused by unstandardised date and storage labelling**
- **41-42% of Australians don't know what 'use by' and 'best before' mean respectively**

Percentages above from survey n=1000





National Date + Storage Advice (Phase 1): 2024-2025

A new approach to date labelling and storage advice that will play a role in reducing consumer food waste.

Better, more consistent storage advice and date labelling that could be on or off packaging or a combination of these options — technology-assisted solutions included. Information about how specific foods should be treated and how long they last, tips on how to tell if food is edible or to refresh, how to properly handle and store such food physically, and advice on the correct temperature and modes of storage

<https://endfoodwaste.com.au/national-date-labelling-and-storage-advice-phase-1/>



Government of South Australia
Green Industries SA





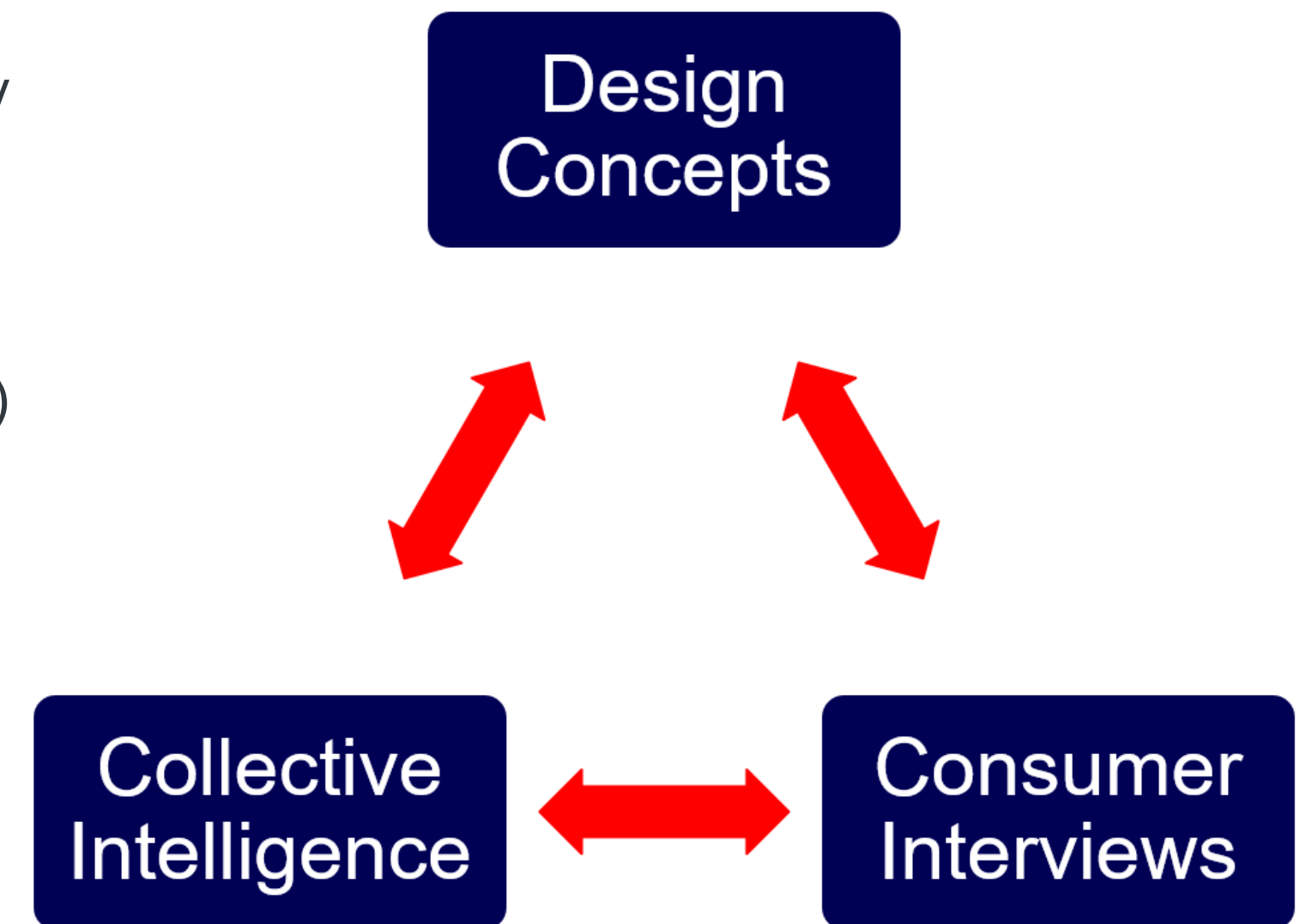
National Date + Storage Advice (Phase 1): Data + methodology

1a - Systematic Literature Review (72 academic papers and 20 Government/ Industry reports from the last 10 years analysed)

1b - Consumer Interviews (125 1-hour interviews conducted across 5 food categories)

1c - Pilot Design Concepts (20 design concepts - 10 date labels/ 10 storage advice – based on insights from 1a and 1b)

1d - Collective Intelligence (7 moderated online workshops with 37 participants)



<https://endfoodwaste.com.au/national-date-labelling-and-storage-advice-phase-1/>



Date labels are not straightforward





Packaging design is
problematic



Best Before and Use By confuse consumers

A close-up photograph of a refrigerator drawer filled with various frozen food items. In the foreground, two large loaves of bread are wrapped in clear plastic. Behind them, there are several bags of frozen vegetables, including green peas and green beans. To the right, a bag of frozen dumplings is visible. The drawer is made of clear plastic, and the items are packed closely together.

Storage advice is incomplete and insufficient

National Date + Storage Advice (Phase 1): Design better enabling action

HOP

BEST BEFORE
02 SEP 24
USUALLY GOOD AFTER THIS DATE

BEST BEFORE
02 SEP 24
OFTEN GOOD AFTER THIS DATE



USE BY
02 SEP 24
DO NOT CONSUME AFTER THIS DATE

USE BY
02 SEP 24
DO NOT CONSUME AFTER THIS DATE



DL-H1

DL-H2

SKIP

BEST BEFORE
02 SEP 24
SNIFF • SEE • TOUCH

BEST BEFORE
02 SEP 24
STORE IN THE FRIDGE



USE BY
02 SEP 24
DO NOT EAT AFTER

USE BY
02 SEP 24
KEEP IN THE FREEZER



DL-S1

DL-S2

DL-S3

JUMP

BEST BEFORE
02 SEP 24
SNIFF
SEE
TASTE
AFTER DATE

LOOK, SNIFF, AND TASTE
BEFORE CONSUMING



USE BY
02 SEP 24
DON'T CONSUME
AFTER DATE

USE BY
02 SEP 24
DO NOT CONSUME AFTER



DL-J1

DL-J2

DL-J3

DL-J4

DL-J5

BEST BEFORE
02 SEP 24
THEN SNIFF, SEE, AND TASTE IF PAST THE DATE

USE BY
02 SEP 24
DO NOT CONSUME IF DATE HAS PASSED

BEST BEFORE
02 SEP 24
OFTEN GOOD AFTER
STORE IN THE FRIDGE AT 4°C

USE BY
02 SEP 24
DON'T EAT AFTER
STORE IN THE PANTRY

BEST BEFORE
02 SEP 24
IF PAST THE DATE
STORE IN THE FRIDGE AT 4°C
CAN BE SAFELY CONSUMED 3 DAYS PAST THE DATE
FREEZE TO KEEP LONGER

USE BY
02 SEP 24
IF PAST THE DATE
STORE IN THE FRIDGE AT 4°C
KEEPS 4 WEEKS IF FROZEN ON THE DAY OF PURCHASE



Reference: Llagas et al (2025)

<https://endfoodwaste.com.au/national-date-labelling-and-storage-advice-phase-1/>

Consumer Interviews resonate with Australians

183 stories in all states / territories

Reached over **43 million people**

\$1.6 million in ad space

24 Interviews

Highlights:

2 interviews with 7 News

ABC/Nine Radio across Australia

Ch.10 “Planet Shapers”

The Guardian

PKN Packaging News

RetailWorld



'Confusing' labelling causing food wastage, extra cost for Aussies

By Adam Vidler | 12:03pm Sep 19, 2024



A new study has shown how unclear labelling and storage advice is making Australians throw out food, hence costing them more at the [shops](#).

The RMIT University study revealed that about one third of all food in Australia is either lost or discarded every year.

And part of that is due to confusion over "use-by" and "best before" labels.

Reference: Parker et al (2025)

Position Paper resonates with Australians

453 media pieces in all states and territories (and counting)

Reached over 14 million people

Advertising equivalent: \$495,000

23 Interviews

Highlights:

7 News, 9 News, ABC News

SBS Digital, ABC Digital

ABC Radio in all states

3AW, 2GB, 4BC, 5aa, 6PR & Gold

Food & Beverage

Retail World and Packaging News



A new study shows that food labels may be contributing to Australia's food waste. Source: SBS News

Australia

The 'murky' food label that's costing Australian families \$2,500 a year

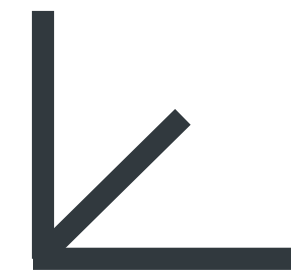
The Courier Mail

6PR PERTH GOLD 104.3

RetailWorld

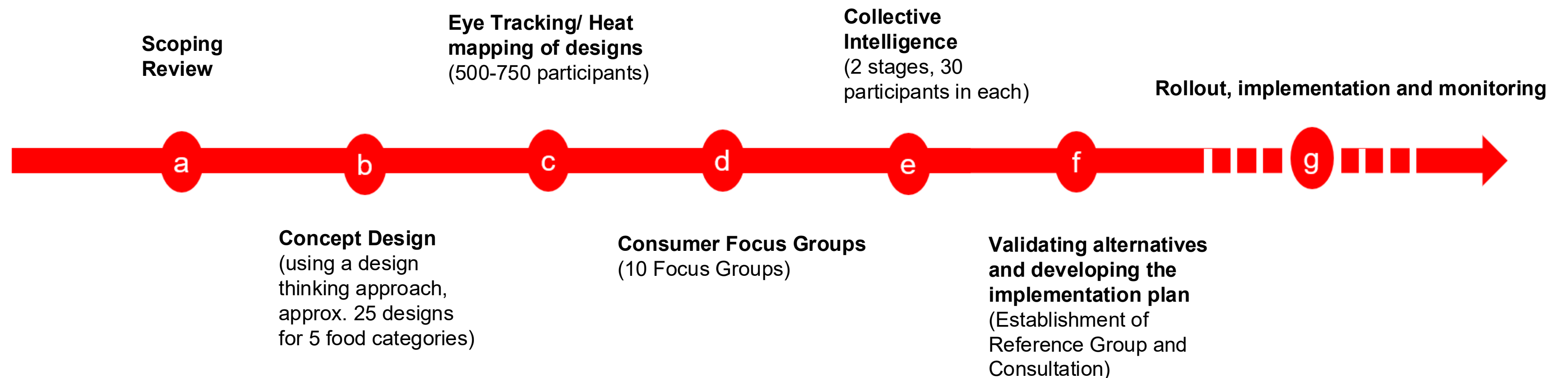


Reference: Parker et al (2025)



National Date + Storage Advice (Phase 2): 2026-28 +

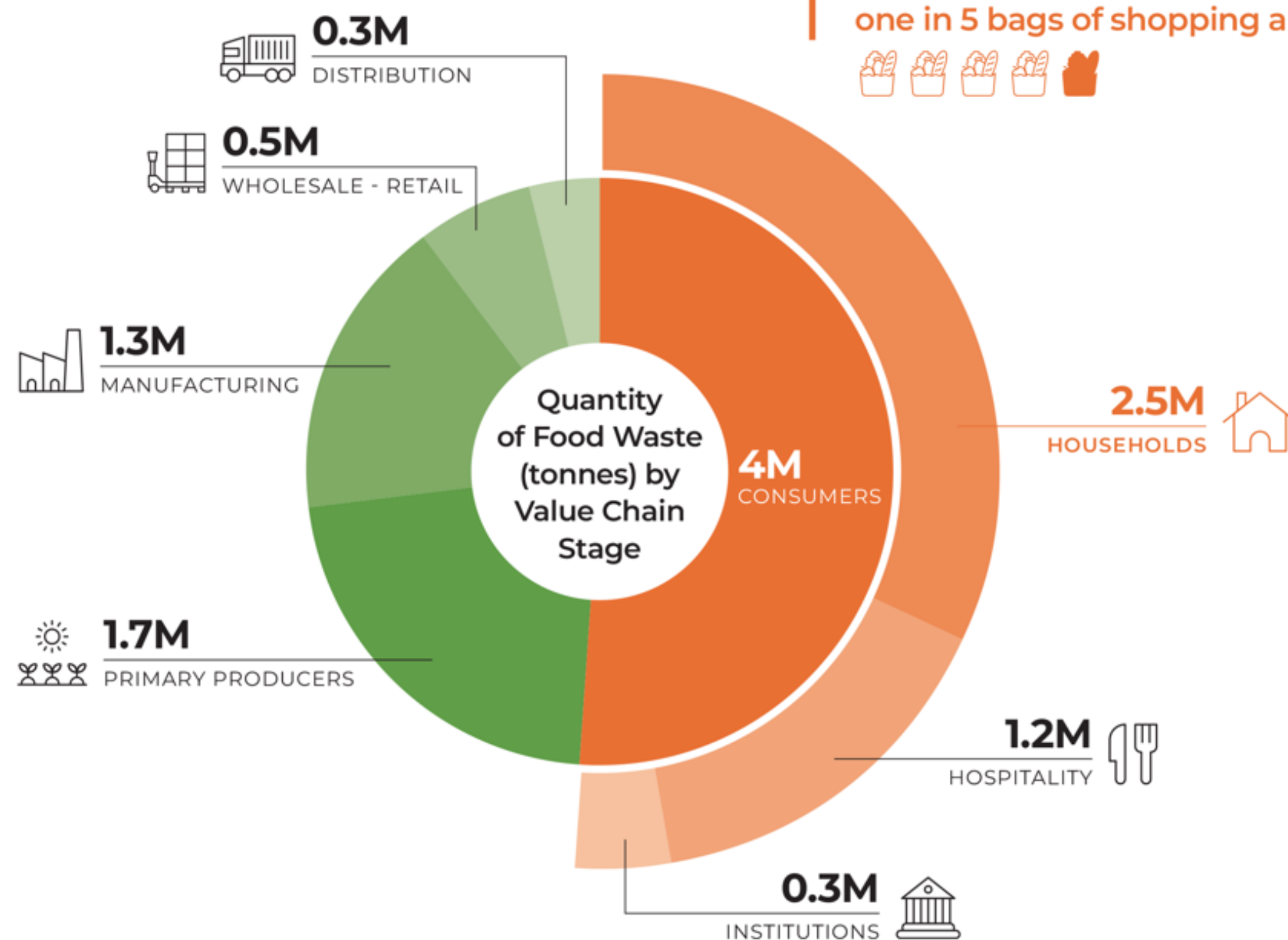
Refining, testing and finalising recommended designs of standardised 'National Date and Storage Advice' (and implementation plan).

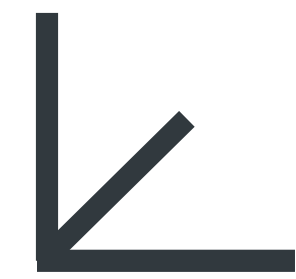




National Date + Storage Advice (Phase 2):

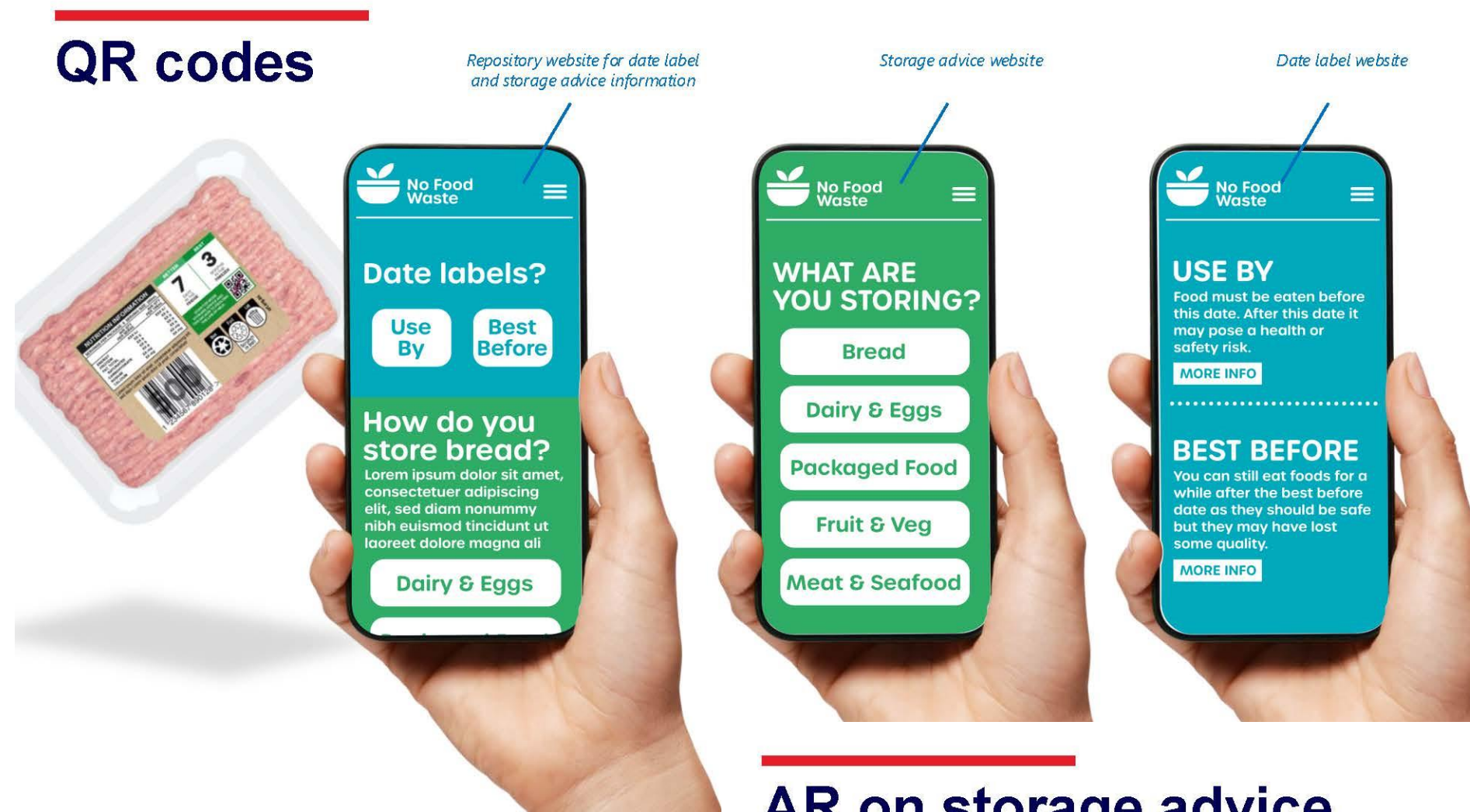
Home-scapes



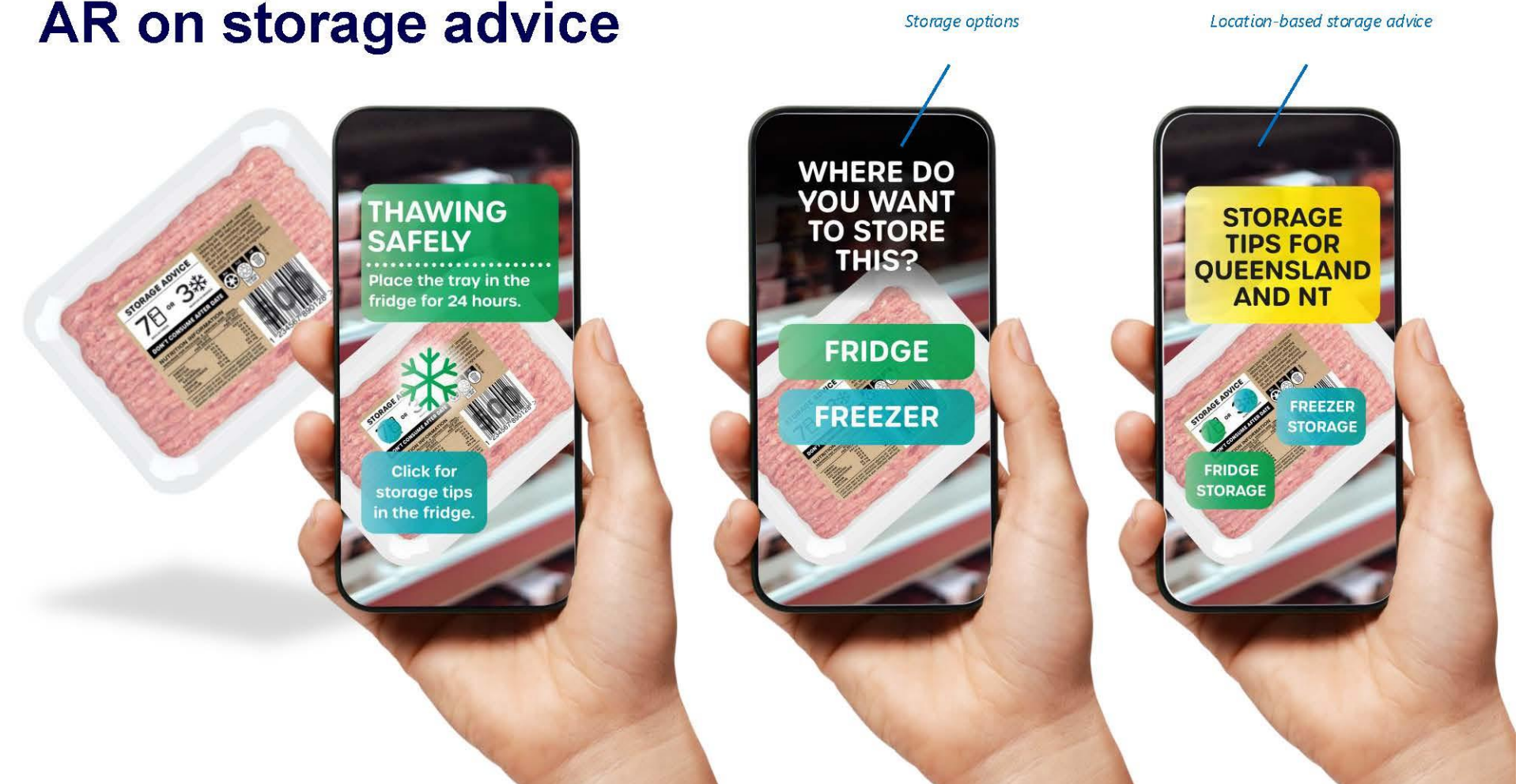


National Date + Storage Advice (Phase 2):

Tech-scapes (GS1 and AFGC looking to bring Smartfacts in for Phase 2)



AR on storage advice



Reference: Llagas et al (2024)

National Date + Storage Advice (Phase 2):

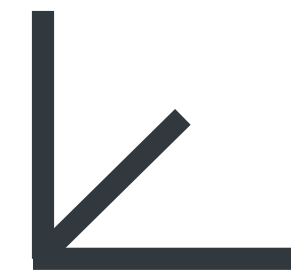
**ARE YOU
WASTING
MORE THAN
YOU THINK?**

Social marketing scapes (TGUW campaign testing)

**LET'S TURN
FOOD WASTE
AROUND**

Join the movement at TheGreatUnwaste.com.au

THE GREAT UNWASTE
TURN FOOD WASTE AROUND



National Date + Storage Advice (Phase 2): 2026-28 +

Key partners



EFWA member consortium (industry)



Scoping
Review

Eye Tracking/ Heat
mapping of designs
(500-750 participants)

Collective
Intelligence
(2 stages, 30
participants in each)

Rollout, implementation and monitoring



Concept Design
(using a design
thinking approach,
approx. 25 designs
for 5 food categories)

Consumer Focus Groups
(10 Focus Groups)

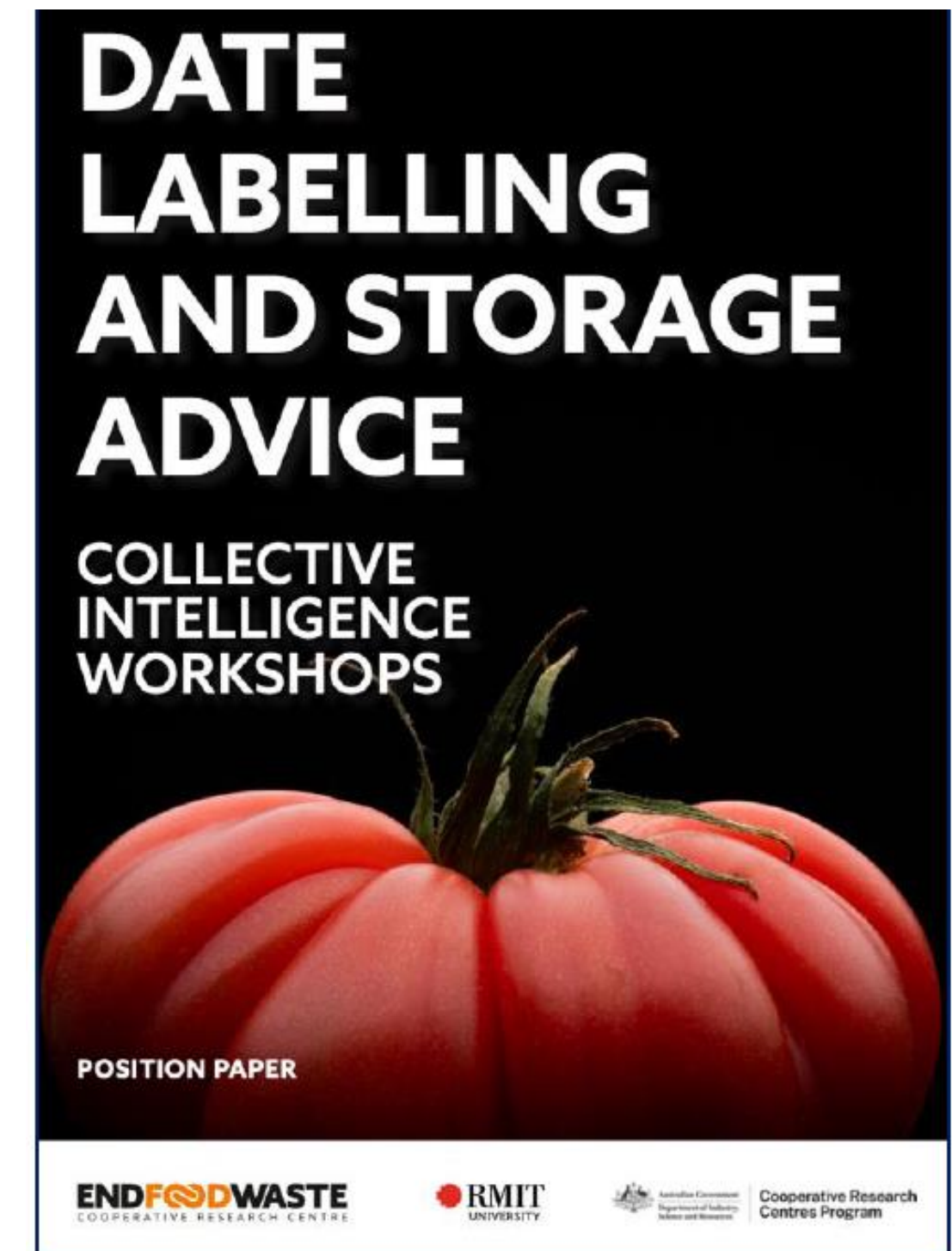
**Validating alternatives
and developing the
implementation plan**
(Establishment of
Reference Group and
Consultation)



National Date + Storage Advice (Phase 2): 2026-27

Partner benefits (in-kind):

- **Brand promotion** through EFWA channels, highlighting your leadership in waste reduction
- **Customer trust and social licence uptick** by providing significant benefit to households
- **Enhanced brand national reputation** and alignment with national food waste targets
- **Customer connection** in opening a direct line to have conversations with households about benefits in saving money and reducing waste
- **Industry designing solutions triaxially**, rather than regulatory/ policy impost on business
- **Innovation in physical/ digital contexts** through packaging, digital systems (i.e. GS1/ AFGC Smartfacts QR code system), etc



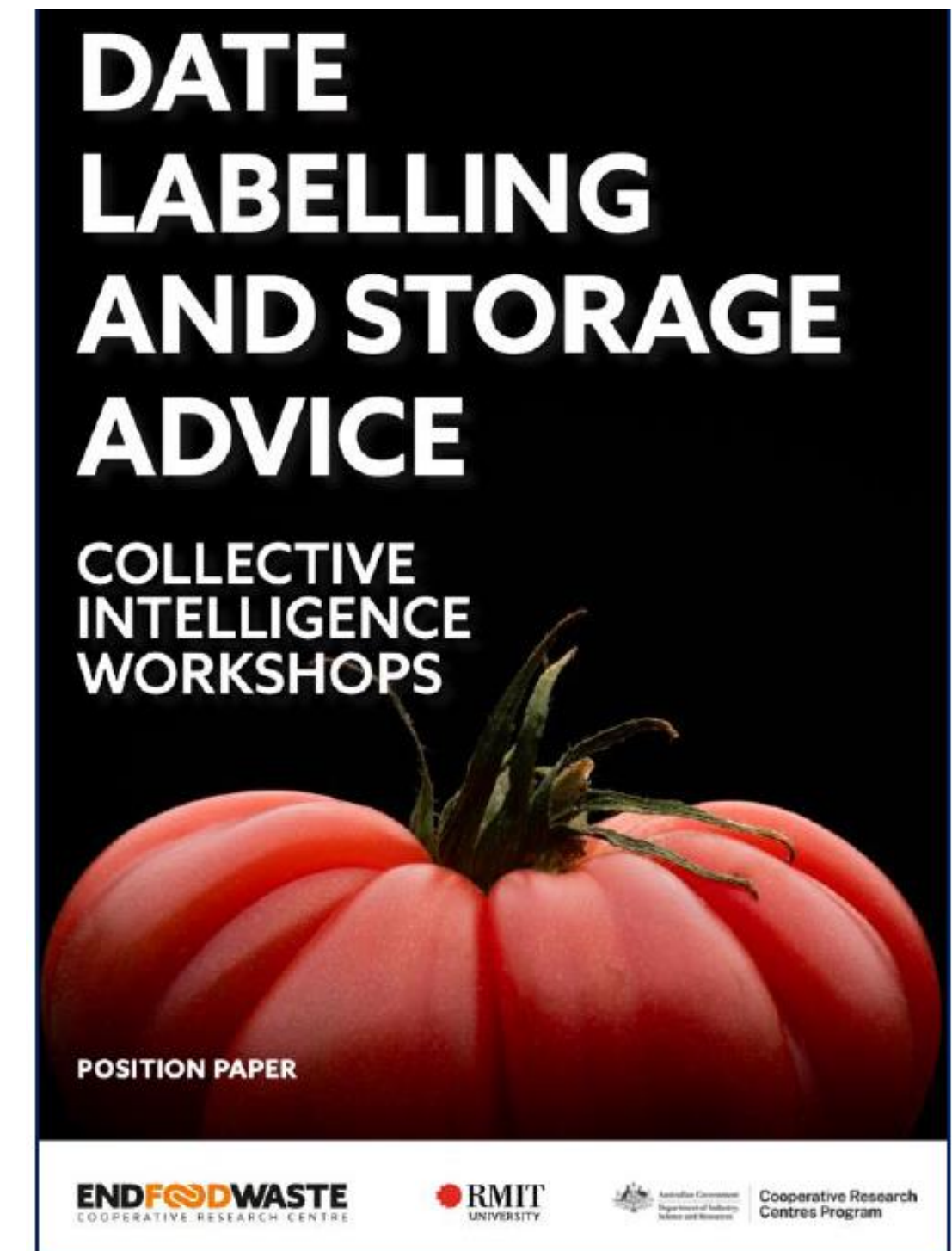
Reference: Llagas et al (2025)



National Date + Storage Advice (Phase 2): 2026-27

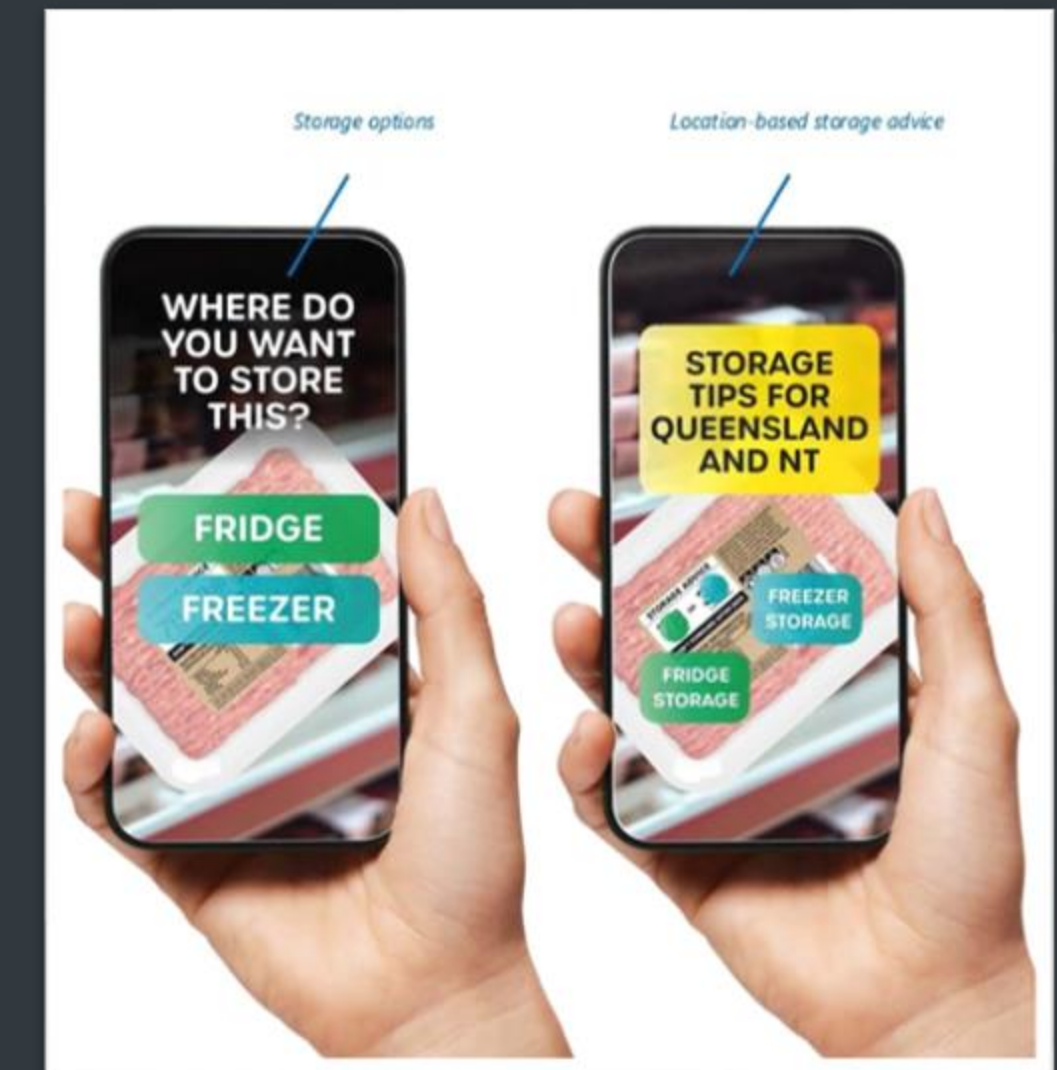
Partner benefits (member consortium):

- **First-mover advantage** in implementing new national labelling standards (cash partners):
 1. **Co-design on work scope** i.e. what SKUs make sense, what education is needed, what design options align to brand/s, etc
 2. **Brand specific design and trialling** i.e. digital/ physical, focus groups, online heat mapping, in-store trials, etc
 3. **Brand specific data from testing, analysis and synthesis** i.e. brands own this IP for commercial/ brand exploitation and benefit
 4. **Agency-based design work equivalent** to \$700k+ project if run commercially.
 5. **A seat at the table** to shape project/ industry innovation through to implementation, education and monitoring i.e. making sure: roll-out aligns to manufacturing; minimises costs; marketing/ communications align with customers; etc



Reference: Llagas et al (2025)

Date Labelling + Storage Advice:



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Prof Lukas Parker – lukas.parker@rmit.edu.au





Department of
Primary Industries and
Regional Development



Curtin University



AFGC WEBINAR

12 SEPTEMBER 2026

The Food Waste PRO Toolkit

Lynne Loo

Dr Janet Howieson



De-risk R&D and investment

Streamline R&D and
decision-making processes

Simple steps with dual use
towards general continuous
improvement

How can the Toolkit help my business?



What will our business get out of the Toolkit?

Process and supply chain map

Waste hotspots – volume and value

Qualified opportunities to improve management

Business case to underpin stop/go decisions

Understanding of solutions your business is ready for

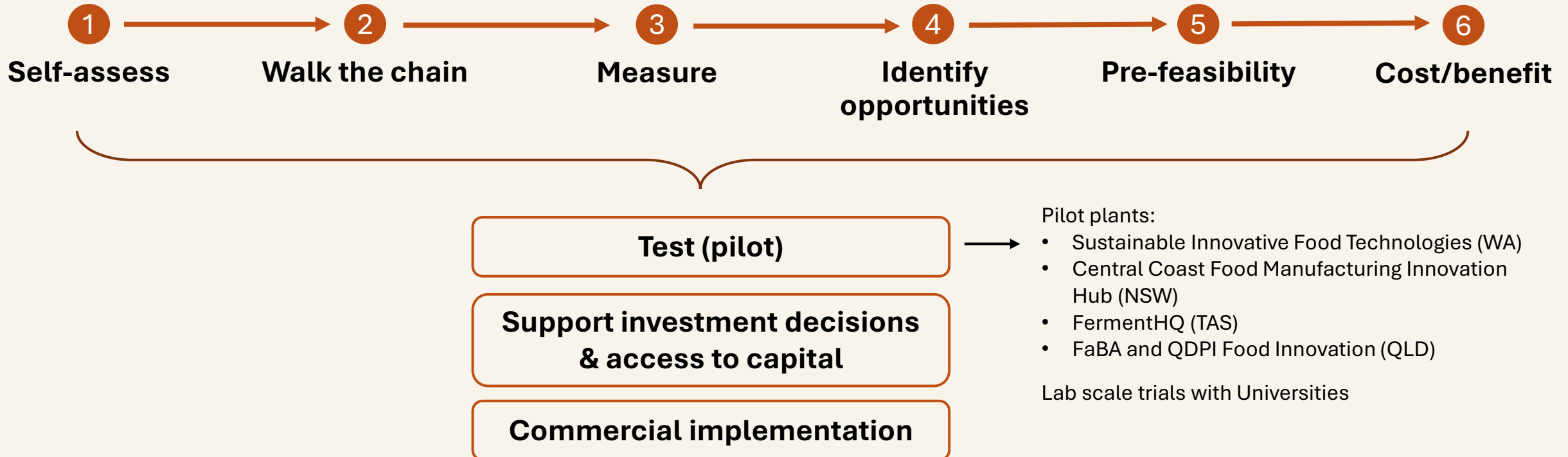


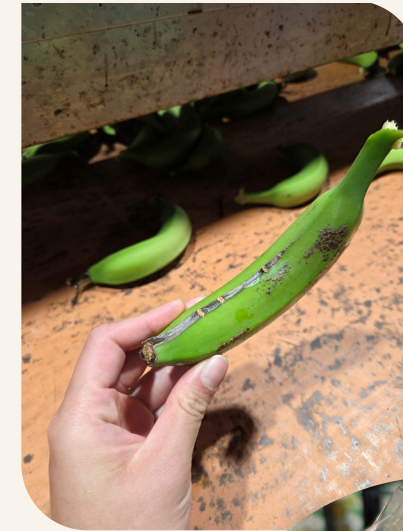
Case study

Kommunity Brew



What are the steps?





Prevention, recycling, NPD

Contact us:

lynne.loo@curtin.edu.au | 0434 591 053

j.howieson@curtin.edu.au | 0423 840 957

Start with small wins:

- What am I ready for? (Step 1)
- Map and measure (Steps 2-3)

Seek help and support:

- Feasibility, cost/benefit analysis (Steps 4-6)

WA DPIRD Food Industry Innovation team:
foodindustryinnovation@dpird.wa.gov.au



How do we get started?

Case study

The Sweeter Banana
Co-operative

